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WAR DEPARTMENT

Annual Reports, 1916

(IN THREE VOLUMES)

Volume I

Reports of

THE SECRETARY OF WAR
THE CHIEF OF STAFF
THE ADJUTANT GENERAL
THE INSPECTOR GENERAL
THE JUDGE ADVOCATE GENERAL
THE QUARTERMASTER GENERAL
THE SURGEON GENERAL
THE CHIEF OF ORDNANCE
THE CHIEF SIGNAL OFFICER
THE CHIEF OF MILITIA BUREAU
THE CHIEF OF COAST ARTILLERY
THE SUPERINTENDENT MILITARY ACADEMY
THE CHICKAMAUGA AND CHATTANOOGA
PARK COMMISSION
THE GETTYSBURG PARK COMMISSION
THE SHILOH PARK COMMISSION
THE VICKSBURG PARK COMMISSION

WASHINGTON
GOVERNMENT PRINTING OFFICE
1916

ARRANGEMENT OF THE ANNUAL REPORTS OF THE WAR DEPARTMENT FOR THE FISCAL YEAR ENDED JUNE 30, 1916.

Volume I.....Secretary of War.

Chief of Staff.

The Adjutant General.

Inspector General.

Judge Advocate General.

Quartermaster General.

Surgeon General.

Chief of Ordnance.

Chief Signal Officer.

Chief of Militia Bureau.

Chief of Coast Artillery.

Superintendent Military Academy.

Chickamauga and Chattanooga Park Commission.

Gettysburg Park Commission.

Shiloh Park Commission.

Vicksburg Park Commission.

Volume II.....Chief of Engineers (without Appendices).

Volume III.....Chief of Bureau of Insular Affairs.

Governor of Porto Rico.

The Philippine Commission.

CONTENTS.

	Page
Report of the Secretary of War.....	5
Report of the Chief of Staff.....	153
Report of The Adjutant General.....	233
Report of the Inspector General.....	295
Report of the Judge Advocate General.....	307
Report of the Quartermaster General.....	329
Report of the Surgeon General.....	463
Report of the Chief of Ordnance.....	803
Report of the Chief Signal Officer.....	857
Report of the Chief of Militia Bureau.....	893
Report of the Chief of Coast Artillery.....	1161
Report of the Superintendent Military Academy.....	1179
Report of the Chickamauga and Chattanooga Park Commission.....	1219
Report of the Gettysburg Park Commission.....	1227
Report of the Shiloh Park Commission.....	1239
Report of the Vicksburg Park Commission.....	1249

REPORT OF THE SECRETARY OF WAR.

REPORT OF THE SECRETARY OF WAR.

WAR DEPARTMENT,
Washington, D. C., November 20, 1916.

To the PRESIDENT:

I have the honor to submit the following report of operations of this department for the past year:

On February 10, 1916, Hon. Lindley M. Garrison resigned as Secretary of War, and on February 11, 1916, Maj. Gen. Hugh L. Scott, United States Army, Chief of Staff, was appointed by you Secretary of War, ad interim, under the provisions of section 179, Revised Statutes. Gen. Scott served until March 9, 1916, when I took the oath of office as Secretary of War.

THE MEXICAN SITUATION.

The raid on Columbus, N. Mex., and the Pershing Expedition.—The disturbed conditions on the Mexican border culminated in an attack by Mexican bandits on Columbus, N. Mex. A description of this attack and of several engagements that followed it, gathered from the reports received by the Department, is given below:

On the night of March 8–9, 1916, the Mexican outlaw, Francisco Villa, with a force variously estimated at from 500 to 1,000 men, crossed the international border from Mexico to the United States at a point about 3 miles west of the border-line gate and concentrated his force for an attack on the town of Columbus, N. Mex. The attack was made during hours of extreme darkness and was for the purpose, according to information subsequently obtained by the military authorities, of looting the town after disposing of the garrison. A fight ensued in which 7 American soldiers were killed and 2 officers and 5 soldiers were wounded, and 8 civilians killed and 2 wounded. The Mexican bandits killed in the town, the camp, and on the border line numbered 67, while the wounded and captured numbered 7.

Immediately after the raid one troop of Cavalry crossed the border and pursued the Mexicans. An additional troop, stationed at the border-line gate, also mounted and struck the retreating Mexicans in the flank; the two troops, then joining, continued the pursuit of the Mexicans south for a distance of 12 miles, discontinuing the pursuit only when their ammunition was exhausted and the horses and men, without water and almost exhausted, could continue no longer. The bandits in the meantime retreated in a southeasterly direction. During this running fight a number of Mexicans, estimated to be between 70 and 100, were killed, but no accurate estimate of the wounded can be made. Much property and many animals were abandoned by the Mexicans in their flight.

On March 10, 1916, the commanding general of the southern department was directed to organize an adequate military force under the command of Brig. Gen. John J. Pershing, with instructions to proceed promptly across the border in pursuit of the Mexican outlaws who had attacked Columbus. Under these instructions, two columns were organized, one starting from Columbus and the other from Culberson's ranch. The advance of the Columbus column, consisting of 7 troops of the Thirteenth Cavalry, the Sixth and Sixteenth Infantry, Battery C, Sixth Field Artillery, and Ambulance Company No. 7, started, on March 15, on the road, through Palomas, Ascension, Corralitos, toward Casas Grandes. The Culberson column, consisting of the Seventh Cavalry, 10 troops of the Tenth Cavalry, and Battery B, Sixth Field Artillery, left the same night, via the Ojitas route, and arrived at Colonia Dublan, 4 miles north of Nueva Casas Grandes, on the night of March 17. These troops pushed rapidly south, the bandits scattering and fleeing from their front. Gen. Pershing was acting under orders to respect in every manner the sovereignty and rights of Mexico and her people, and to avoid all possible occasion of conflict with, or irritation to, the representatives of the de facto Government of Mexico.

The Parral incident.—During the pursuit of Villa and his followers, Maj. Frank Tompkins, Thirteenth Cavalry, with Troops K and M of that regiment, under the command of Col. W. C. Brown, Tenth Cavalry, camped outside of the town of Parral, Mexico, and sent a detachment of soldiers to the town for the purpose of purchasing supplies, at about 11 o'clock a. m., April 12, 1916. Maj. Tompkins was cordially received by the higher civil and military officials.

The Mexican general, Lozano, accompanied Maj. Tompkins on his way to the camp. On the outskirts of the town, groups of native soldiers and civilians jeered, threw stones, and fired on the column. Maj. Tompkins at once took a defensive position north of the railroad but was soon flanked by Mexican troops and forced to retire. The American troops continued to withdraw to avoid further complications until they reached Santa Cruz, 8 miles from Parral. Gen. Lozano attempted to control his men when the fighting first began but failed. The known casualties were 2 American soldiers killed, 2 officers and 4 soldiers wounded, 1 soldier missing, and 40 Mexican soldiers killed. The number of Mexican soldiers wounded is not known, although it is known that one Mexican civilian was wounded.

The Carrizal incident.—For some time subsequent to this, Gen. Pershing's force maintained itself in substantially the same position, using scouting parties and detachments for the purpose of locating the force of Villa, which had been broken up and scattered in various directions through the difficult and mountainous country through which the expedition had penetrated.

On the morning of the 21st of June, 1916, Troops C and K of the Tenth Cavalry, under the command of Capt. Charles T. Boyd, while on the way to Villa Ahumada on such a scouting expedition, reached the town of Carrizal, and sought permission from the commanding officer of the Mexican forces garrisoned there to pass through the town in order to reach Villa Ahumada. Gen. Gomez, the Mexican commander, sent an officer of his command to the American troops denying the permission requested. During the conference, Mexican troops were seen to move toward the flank of the American troops. The latter assumed a defensive position, but an engagement immediately ensued, in which Capt. Charles T. Boyd and Lieut. Henry R. Adair, Tenth Cavalry, and 7 enlisted men, were killed, and Capt. Lewis S. Morey, Tenth Cavalry, and 9 enlisted men were wounded. Twenty-three enlisted men of the Tenth Cavalry and 1 civilian interpreter were captured and sent to Chihuahua City. The number of Mexicans killed is estimated to have been 39, including Gen. Gomez. The number of wounded is not known. The 23 enlisted men and the civilian interpreter captured by the Mexicans were released and returned to the United States with their property and equipment.

Gen. Pershing's force has been on Mexican soil since the 15th day of March, during part of the time engaged in active and vigor-

ous pursuit of bandits, but during the larger part of the time encamped generally in the neighborhood of Colonia Dublan. The orders to this expedition pointedly enjoined the maintenance of cordial relations with the native population and the most entire respect for the dignity and sovereignty of the Government of Mexico and its military commanders and forces. It gives me great pleasure to point out the fidelity with which these instructions have been obeyed. Gen. Pershing's force has not only maintained itself in a state of physical fitness and cheerful loyalty to its task, but the men have developed into a robust and vigorous body of troops, and their relations with the native population in Mexico have been characterized by cordiality and friendliness, which was highly creditable to the discipline and spirit of American soldiers. I can not too highly praise the members of this expeditionary force, its commander, and its men, for the restraint, self-control, and zeal which they have displayed and for the credit which they have reflected upon American arms.

Bandit raids across the Mexican border.—In addition to the raid on Columbus, N. Mex., several raids of more or less importance have occurred during the period covered by this report, the most notable of them being:

Glenn Springs, Tex., May 5, 1916, the casualties being 3 American soldiers and 1 civilian killed; 3 American soldiers wounded. At this place, it is believed that 2 Mexican bandits were killed and a number wounded, although it was impossible to secure definite information.

San Ygnacio, Tex., June 15, 1916, the casualties being 4 American soldiers killed and 5 wounded; 6 Mexican bandits killed.

Near Fort Hancock, Tex., July 31, 1916, 1 American soldier and 1 civilian (United States customs inspector) killed, and 1 American soldier wounded; 3 Mexicans killed and 3 captured by Mexican de facto Government troops.

Call of the Organized Militia and National Guard into the service of the United States.—The known presence of large numbers of bandit forces and irregular military organizations, hostile alike to the de facto Government of Mexico and to the Government and people of the United States, made it apparent that further aggression upon the territory of the United States was to be expected. The Mexican border is a long and irregular boundary line, passing in places through cities and

towns, but for great stretches running through sparsely settled regions and through a wild and difficult country. The forces at the disposal of the commander of the Southern Department for the protection of this border had been strengthened from time to time by the transfer to that department of a very large part of the Regular Army within the limits of the continental United States, including some detachments of Coast Artillery forces, withdrawn from their coast defense stations. It was, however, clear that even thus strengthened the forces under Gen. Funston's command were inadequate to patrol this long and difficult line and to assure safety to the life and property of American citizens against raids and depredations. The President, therefore, deemed it proper to exercise the authority vested in him by the Constitution and laws to call out the Organized Militia. On May 9, 1916, he issued a call, through the governors of the States of Arizona, New Mexico, and Texas, directing the concentration of the militia of those States at places to be designated by the commanding general of the Southern Department.

San Antonio, Columbus, and Douglas were designated as the places of concentration for the Militia of Texas, Arizona, and New Mexico, respectively, and upon the arrival of the militia, the necessary procedure for their muster into the service of the United States, under the provisions of the act approved January 21, 1903, as amended by the act of Congress approved May 27, 1908, was at once entered upon and vigorously prosecuted, the greater part of the militia, so called, having been mustered into the service of the United States before the close of the fiscal year. It was also directed by the department that the Federal authorities assume the duty of recruiting for the militia service of the United States. In accordance with these directions, the commanding general of the Southern Department was ordered on May 27, 1916, to detail officers and enlisted men from the Texas Militia mustered into the service of the United States to recruit the Militia of Texas to its full strength, and similar orders with respect to recruiting were issued with regard to the militia of other States at a later date. The reasons which caused the President to issue the call for the Militia of Texas, Arizona, and New Mexico on May 9, 1916, impelled him, on June 18, 1916, to call into the service of the United States a large part of the Organized Militia and National Guard of the other States of the Union and the

District of Columbia, the call being duly issued on the date last mentioned through the governors of all the States concerned and the Commanding General of the District of Columbia Militia.

In the meantime, the National-Defense Act had been approved June 8, 1916, providing, among other things, for the transition of the Organized Militia of the several States and the District of Columbia into the National Guard, by taking the oath prescribed by that act, and this transition was in progress in the several States when the call of June 18 was made. The call of the President found the militia at the very beginning of its transition from the Organized Militia, provided in the earlier legislation, into the National Guard, provided by the recent National-Defense Act. There had been no time for the completion of the procedures provided for perfecting the National Guard, so that the mass of detail which under ordinary circumstances is involved in the concentration of the militia at various mobilization points was increased by the fact that some of the organizations existed wholly under their earlier status, some had completed their organization under the National-Defense Act, and some were in the course of changing their relation to the Federal Government from that provided by one to that provided by the other of these laws. Moreover, the provisions of the National-Defense Act, not having previously been applied, were required to be interpreted in many respects. There had not yet been time to work out in an orderly way interpretations of the act and instructions under it for the guidance either of officers of the Regular Army or of the militia, who were required to cooperate in such a movement. The task thus imposed upon the department and the chiefs of the bureaus concerned was most exacting, and I can not too highly praise the zeal and intelligence with which these difficulties were met or the self-sacrifice with which the personnel of the department devoted itself day and night to the speedy, orderly, and successful accomplishment of its task.

To have worked out each detail, completed the transition of such State organizations, and recruited it to its full strength before transferring these forces to the border would have taken more time than the exigencies of the situation permitted. Instructions were therefore given on June 23 to the commanding generals of the Eastern Central, and Western Departments to transfer each unit to the border as soon as it was reasonably equipped for field service.

On August 31, 1916, the date of the latest complete returns received, the troops in the Southern Department consisted of 2,160 officers and 45,873 enlisted men of the Regular Army, and 5,446 officers and 105,080 enlisted men of the National Guard, making a total of 7,606 officers and 150,953 enlisted men in that department. On the date given there were 1,557 officers and 28,176 enlisted men of the National Guard in the other military departments, making a total of 7,003 officers and 133,256 enlisted men of the National Guard in the Federal service on August 31, 1916.

The present situation.—The mere presence of this enlarged force on the border has served to preserve peace and to protect life and property. Disturbances by outlaws and bandits in northern Mexico have continued and roving bands of various numbers have moved through the territory, harassing Mexican forces and raiding Mexican communities, but they have not ventured an attack upon the people of the United States. In the meantime the militia forces on the border have been drilled, their organizations perfected, and their personnel accustomed to life in camp in the performance of this defensive duty. On the advice of the military commanders, it has been determined that full protection can be given on the border without utilizing the entire force of the National Guard in the service of the United States. The department therefore determined to send from time to time from their State mobilization camps portions of the National Guard which had not as yet done border duty, and in exchange for these freshly arrived contingents, the commanding general of the Southern Department has been directed to select equivalent numbers of troops which have been in actual border service for return to their home stations for muster out. These movements have been taking place with some rapidity and are now substantially completed. The number of National Guard now on the border is substantially 110,000 officers and men.

From the beginning the department appreciated the sacrifice which the members of the National Guard were called upon to make in the interest of the national defense. These organizations, made up of men engaged in all sorts of industrial, commercial, and professional activity, were summoned suddenly and without opportunity adequately to provide for a prolonged absence from home. In many instances family illness, business commitments, and other pressing

engagements had to be faced, and an effort was made by the department in the presence of extreme cases of hardships to minimize the sacrifice. The most distressing class of cases were, of course, those of men with dependent families or relatives for whom no provision had been made and who were entirely dependent upon the peacetime earnings of the citizen soldier. A number of cases were presented in which members of the National Guard were the occupants of public office, the continued functions of which were essential to the National and State Governments, and in some instances members of the National Guard were found to be pivotal and apparently indispensable directors of industrial and commercial enterprises upon which the Government is obliged to rely for the proper supply of commissary and equipment to the Army itself. The department attempted to deal with these embarrassments on the principle that the thing best for the National Guard, the thing which would tend to strengthen and build it up, would be most in harmony with the intention of the Congress in the National-Defense Act. A limited number of discharges were therefore granted on the ground of public policy, so as not to weaken the spirit of the National Guard at home by depriving it of the regular performance of the governmental functions or of the industrial and commercial operations upon which its supply and maintenance depended. For the relief of those members of the National Guard having dependent families or relatives an order was made authorizing the discharge of all soldiers so circumstanced upon their own application. A relatively small number of members of the National Guard took advantage of this order and were returned to their homes. By this means acute distress was prevented and the organization of community relief for dependent families, which had been undertaken in many places as soon as the call for the Guard was issued, was rendered less burdensome. The Congress later appropriated the sum of \$2,000,000 to be expended by the department under certain limitations provided in the act in the care of the dependents of soldiers, and this operation made unnecessary the continuance of the original order authorizing the discharge of such members of the Guard. The order was therefore withdrawn, and the department is now engaged in the distribution of the funds provided by Congress for the object stated.

The National Guard is, both by law and in contemplation of its members, the line of defense immediately back of the Regular Army.

It is organized for the purpose of responding quickly to emergency calls, but our country has been singularly free from international boundary difficulty which required more force than could be found in the organizations of the Regular Army within the country. The sort of duty presented by the Mexican difficulty, therefore, is unusual and may well have been unanticipated. The readiness with which the militia responded to this call was most gratifying, and when the transitional condition in which it was found by the call is remembered, the confusions and difficulties attending the mobilization will seem insignificant in comparison with its success and with the splendid spirit with which both men and officers of the National Guard responded.

The duty in Mexico and on the border has been of the most trying kind which soldiers can be called upon to perform. The movement and enthusiasm of active military operations supplies a spirit of its own, but the soldier who is required to wait inactive finds it difficult to reconcile himself to the privations of camp life and to the separations from home, friends, and normal occupation required of him, and yet this most trying of services is just what has been required of our Regular Army and of the National Guard on the border. Their time has of course been used in profitable military training, and an enormous incidental advantage has accrued to the country therefrom. But it is not strange that some restlessness and complaint have been heard both from an occasional member of one of the Guard forces and from their friends at home who have not appreciated the necessity for their sacrifice, in view of the absence of active operations. These complaints, however, have been minor and infrequent. The spirit of the regiments has been high, their service cheerful, and their appreciation both of their opportunity for public service and of the value of the training received by them has been evidenced from all quarters.

In a subsequent part of this report I deal with the question of health and sanitation, so that I here but remark in passing that the health of the soldiers on the border has been remarkable; their freedom from camp fevers and from serious illnesses of all kinds is perhaps as striking an incident of efficient medical supervision as can be found in the history of any army. The initial difficulties of supply and transportation were soon solved. I have personally met the officers and men of several regiments which have returned from

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opportunities of the kind. In the development of such a program we can remember that for the most part any Army is made up of young men, and those wholesome recreations and activities to which young men normally resort can be made the basis of what the Army ought to undertake to supply for its own uses.

Transportation of the Regular Army and militia to the Mexican border.—In a previous portion of this report I have discussed the raid on Columbus, N. Mex., and the military measures adopted in consequence of it, including the call of the Organized Militia and National Guard into the service of the United States. It seems to me worth while, however, to make a somewhat detailed reference to the transportation of these troops to the Mexican border, both because I desire an opportunity to report specifically the efficient cooperation of the railroads with the Government and also because the general question of transportation facilities is one of very great military importance.

The railroads of the United States have been built in response to commercial and industrial needs. Our continent has been developed and opened up by a process of railroad building which had in view the transportation of raw materials and finished products, rendering our mineral and lumber resources accessible and enabling our rapidly increasing population to develop the agricultural and economic resources of the Nation. It is probably just to say, however, that very little thought has been given in our railroad development to their possible use for military purposes. We have built no strategic railroads, our frontiers have been neglected as possible scenes of military operations, and there has accordingly been little or no railroad building which had as its object a possible call upon the railroads of the country rapidly to transport large bodies of men and to maintain continuous streams of military supplies for their support. This was not unnatural, as the wide seas have been the frontier of the United States, and we have been in contact with no highly organized and powerful military nation. Our relations with our continental neighbors have been peaceful and friendly, and the development of civilization on this continent has had an industrial and commercial aspect with little or no suggestion of military preparation. We have, it is true, given far less thought to the problem of transportation

the border, and without minimizing the inconvenience to which these men have been put and the sacrifices which they have made, I can not help feeling that they have received some compensation from the experience, as they present uniformly pictures of splendid, vigorous bodies of men, trained and disciplined, and with the added dignity which comes from having performed a saving service for their country.

Many valuable lessons will be learned from this mobilization experience which the department hopes can be applied in further organization of the National Guard. As yet it is too soon to sum up in detail all of these experiences, nor would it be just to the Guard to measure its response to this need by a mere statistical exhibit of its condition at the time of the call or the time of the transfer of its units to the border. In this connection, however, I desire to point out that under modern conditions one of the great needs of the Army organization is a suitable program of recreational activity for soldiers during periods of enforced inactivity. In his home station the soldier of the Regular Army will undoubtedly in the future make use more and more largely of educational opportunities and there will be automatically evolved certain recreational activities proper to the place, the climate, and the disposition of the men, but the soldier in camp has not the permanent facilities which can be found in the well-ordered Army post. His entire time can not be spent in drill, and there is, therefore, very great need for the development of a systematic plan which will provide for the soldier under such conditions an opportunity for sound, healthful, and agreeable recreation. The Young Men's Christian Association has realized this need and most generously undertaken to provide facilities for our troops on the border which under the conditions may be regarded as comparable to social and recreational opportunities offered by their institutions to the young men of our cities. Undoubtedly, this service has been of the highest value and has been appreciated by the men as well as by the department. I venture, however, to express the hope that we shall be able to devise, as a part of our own systematic provision for the Army, recreational facilities and opportunities which will follow the Army to its camp, and both brighten the life of the Army and occupy the leisure of its members when the exigencies of the service require their separation from accustomed

opportunities of the kind. In the development of such a program we can remember that for the most part any Army is made up of young men, and those wholesome recreations and activities to which young men normally resort can be made the basis of what the Army ought to undertake to supply for its own uses.

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from a military point of view than other great nations, but our occasion for thinking in that direction has been less urgent. The War College Division of the General Staff has made interesting and valuable studies upon the mobilization and use of transportation equipment, and undoubtedly the Council of National Defense will give further valuable study to this question; but the disturbed condition on the Mexican border in consequence of the Columbus raid gave us an actual experiment in the use of our railroads, the readiness with which their facilities could be organized in the service of the Government, and a most instructive and helpful demonstration of the hearty cooperation which the Government can expect from those who manage these great transportation enterprises. From the report of the Quartermaster General I quote the following description of the steps taken and the results obtained:

COOPERATION BETWEEN THE TRANSPORTATION COMPANIES AND THE QUARTERMASTER CORPS.

Especial attention was devoted during the fiscal year 1916 to the establishment of a closer cooperation between the Quartermaster Corps and the various transportation interests with a view to coordination in the movements of troops and supplies for the Army. The officer in charge of the transportation division, Office of the Quartermaster General, appeared before several of the transportation associations and outlined a plan of mutual cooperation which would be of benefit to both the carriers and the Government in case any necessity arose involving the transportation of large numbers of troops, the plan outlined being practically that which has since been placed in effect.

Under date of October 16, 1915, a letter was prepared in the Office of the Quartermaster General recommending that the Secretary of War communicate with the American Railway Association (which association is composed of the presidents, general managers, and other chief operating officials of the American railways), and suggest the establishment within that association of a committee on military transportation to whom the department could look for any information that might be desired as to the railroads of the United States, and with a further view to coordination and cooperation between the railroads and the War Department in the transportation of troops and supplies of the United States. On October 26, 1915, a letter of the nature indicated was sent by the Secretary of War to the American Railway Association, and after some further correspondence a "special committee on cooperation with the military authorities" was appointed by that association. This committee was, and is, composed of the following gentlemen:

Fairfax Harrison (chairman), president Southern Railway.

R. M. Aishton, president Chicago & North Western Railway.

A. W. Thompson, vice president Baltimore & Ohio Railroad.

W. G. Besler, president Central Railroad of New Jersey.

Conferences were held with this committee, and a general plan of cooperation outlined to be placed in effect at the time of any public emergency.

Immediately after the call for mobilization of the State troops was issued this committee met in the Office of the Quartermaster General with Lieut. Col. Chauncey B. Baker, representing that office, and the plans previously determined were at once placed in effect. Arrangements were made for placing a competent railroad official at each department headquarters, at each mobilization camp, and in the Office of the Quartermaster General. These representatives were to act as an advisor to the officers of the Quartermaster Corps at these various points on any matters affecting rail transportation. They were all men of the highest reputation in the railroad world and did not represent any particular railroad, but were representatives of all lines interested.

Directly after the announcement of the mobilization this committee of the American Railway Association also called upon representatives of the various railroads of the country to meet in Washington for the purpose of extending every possible assistance among the railroads themselves. The object of this meeting was to make all of the railroad equipment, motive power, and personnel of the country available to affect this movement in the most expeditious manner possible.

The main object of the special committee on cooperation with the military authorities was to *assist* the War Department in the transportation of troops and supplies, and the committee acted only on instructions from the War Department, except in matters directly affecting the operation of trains.

When it was definitely known that an organization was to move the camp quartermaster consulted with the American Railroad Association representative at his camp and advised him as to the strength of the organization, and it was the duty of the American Railway Association representative to see that all railroad equipment, other than tourist cars, was promptly assembled in time for the movement. Tourist cars were ordered direct from the Office of the Quartermaster General, and the camp quartermaster was immediately advised by wire whether tourist cars could be furnished from point of origin; if not, the American Railway Association representative was so advised, and it was his duty to see that coaches were secured for the movement.

In 1912 the Quartermaster General's Office took up with the American Railway Master Car Builders' Association the question of placing placards, in time of war or threatened war, on all carload shipments of Government property. As a result of a large amount of correspondence a plan was formulated which was accepted by all the railroads in the country, and a series of placards adopted. Through the agency of the American Railway Association all railway officials and employees were notified that cars so placarded must be given right of way from point of origin to point of destination. Such cars are placed in the fastest moving freight trains and kept constantly moving to point of destina-

tion, where they are immediately delivered, and at once identified, shifted into position, discharged, and released without the necessity of waiting for the formal bills of lading and official papers of the railways and the Government, the placards themselves serving to fully identify all shipments. All placards bear the legend "UNITED STATES ARMY" at the head, followed by the department to which supplies belong, the car initial, car number, point of shipment, contents, consignee, destination, routing, date shipped, and consignor. Cars bearing these cards are never sidetracked nor shifted into yards except to be placed in through freight trains. Should a car become damaged through any cause, it is given preference and precedence for any repairs; and if repairs require an extended period, contents are loaded into another car and the movement continued.

As a result of this understanding between the railroads and the Quartermaster General's Office shipments of freight are being made with remarkable expedition. Many instances are cited where freight shipments have been sent through from Washington and vicinity to the Texas border in four days, and from New York and vicinity in five days or less; freight from Philadelphia, Pa., has reached San Antonio, Tex., in 79 hours; from the Lakes to the border shipments have been made in an elapsed time of a little more than 48 hours.

The hearty cooperation of the railroads in making these shipments has been rendered without any hesitation whatever, with all the energy possible, and without additional charge to the Government.

It is believed that this simple device, with the fullest cooperation of the railroads, has removed one of the principal sources of criticism applicable to the period of mobilization in 1898.

Where special, urgent shipments have been made they have been followed through by wire to destination, and most satisfactory results have been obtained in every instance.

As a specific example showing how the cooperation of the railroad companies assisted the Army there may be cited the case of the first motor truck company purchased for the expeditionary forces in Mexico.

Bids were invited for a number of trucks, and award made about 5 o'clock the evening of March 14. Twenty-seven trucks were purchased under this advertisement in Wisconsin. These trucks were inspected, the personnel to operate them employed, the trucks were loaded in 14 cars, and tourist car furnished for the personnel, and the train left at 3.11 a. m. March 16. It arrived at Columbus, N. Mex., 1,591 miles away, shortly after noon on the 18th; the trucks were unloaded from the cars, loaded with supplies, and sent across the border, reaching Gen. Pershing's command with adequate supplies of food before he had exhausted the supplies taken with him from Columbus.

In a little more than four days after orders were placed with the manufacturers these trucks had gone across the border at Columbus, 1,600 miles away from the factory, loaded with supplies.

The general plan of cooperation also provided for coordinating the duties of the Pullman Co. in furnishing sleeping-car equipment, and under this plan, when

It became necessary to mobilize the Organized Militia, the supply and distribution of tourist sleeping cars was handled directly under the instructions of the Quartermaster General of the Army. In order to centralize the furnishing of tourist sleepers at the point most convenient to the Government, to utilize the available supply of these cars to the best advantage, and to keep them constantly in service the Pullman Co. changed the supervision of the supply and movement of these cars from the headquarters of the company at Chicago to Washington, where they stationed Mr. C. W. Henry, assistant to superintendent of car service, with a competent force. Mr. Henry was in immediate touch with the Office of the Quartermaster General, and on receipt of request from camp quartermasters for tourist cars he was advised of the needs and at once took steps to supply the cars if they were available at any point. Reports were received by him daily from all parts of the United States showing the number of tourist cars that were available in all sections of the country, and in cases when, on account of the necessity for immediate departure, it was impossible to furnish cars from the starting point, this branch of the Pullman Co. used every effort to furnish the cars en route, immediately starting such cars as could be secured over the route to be taken by the troops, so that they could be transferred to tourist sleeping cars at the first possible opportunity. During the first two weeks of the concentration this force was on duty until nearly midnight every day, including Sundays, and deserves great credit for the excellent assistance rendered the Government.

The great value of the plans made for cooperation and coordination between the railroads and the War Department was fully demonstrated in the mobilization and concentration of the Organized Militia. Every assistance possible was rendered the Government, not only by the American Railway Association and the Pullman Co., but by the various passenger associations, and by the officials and employees of all the railroads concerned, from the presidents of the companies down to the minor employees. In addition to the representative of the American Railway Association, nearly all the important southwestern railway lines had representatives in Washington during the entire movement, and these representatives kept in close touch with the transportation over their respective lines and were available for consultation at any time, if desired by the department. The cooperation of the American Railway Association representatives, with their expert knowledge of transportation conditions, has proved of great value to the department, and quartermasters have been relieved of a great deal of trouble and annoyance heretofore experienced in the mobilization of large bodies of troops.

It is believed that the careful plan of cooperation adopted and the assistance of the transportation interests in this plan has demonstrated that the problem of rail congestion, which was the bugaboo of the mobilization of troops in 1898, has been entirely eliminated.

The arrangements entered into with railway lines in eastern and western territory, as referred to in the Annual Report of the Quartermaster General for 1915, pages 50 and 51, were continued during the fiscal year 1916, and resulted

in a saving of approximately \$40,000 on passenger traffic. Negotiations are now under way with lines in New England and southeastern territory on a similar basis with every prospect of a successful conclusion; this arrangement will then cover the entire United States. Briefly, it provides for a deduction of 5 per cent from the usual fare available to the Government and for an equitable distribution of the traffic between all lines interested; it simplifies the settlement of accounts and insures the cooperation of the various carriers.

During the early days of the transportation of large bodies of the militia to the Mexican border some uneasiness was felt throughout the country lest the great distances to be traveled by some of these organizations and the hurried preparation of their supplies might produce conditions prejudicial to the health and comfort of the men. This apprehension was quickly allayed. The cases of inconvenience were relatively few. No really serious situation developed, and it seems to me just to claim for the War Department and for the co-operating railroads that they managed a task, although of unusual difficulty and size, with great skill and most commendable success. After the first hurried days order rapidly appeared and although we have during the past summer moved larger bodies of troops longer distances than is at all customary, the movements have been carried out with order, and most comfortable and adequate provision has been made for the men both going to and returning from the Mexican border.

Motor-truck transportation.—The absence of railroad facilities paralleling the international boundary between Mexico and the United States and the penetration of the Pershing expedition into Mexico at a point removed from immediate access to railroad facilities led to very large use by the Army of motor trucks. The report of the Quartermaster General covers in detail the purchases made and the service rendered. I refer to the subject only to point out that the department was able to maintain by motor truck an unbroken supply service for Gen. Pershing and enormously to increase the efficiency of the border patrol by the use of motor vehicles. The development of the motor truck in the past few years has produced a vehicle which is able to traverse wild, unbroken country and, except under abnormal conditions, to transport soldiers and their supplies with certainty and rapidity. Our whole experience in this regard is of great value, and careful studies are being made of the efficiency of the various types of motor vehicles in the border service. Undoubtedly a standard-size truck and a stand-

ard design will be evolved, and the subsequent equipment of the Army with motor baggage trains and motor-propelled ordnance will proceed upon a sounder foundation of information than could have been possible but for the lessons learned from this experience.

THE ARMY.

Increase in enlisted strength in an emergency.—By joint resolution approved March 17, 1916, Congress made provision for increasing the number of enlisted men of the Army in an emergency, in the following language:

* * * When in the judgment of the President an emergency arises which makes it necessary, all organizations of the Army which are now below the maximum enlisted strength authorized by law shall be raised forthwith to that strength and shall be maintained as nearly as possible thereat so long as the emergency shall continue: *Provided*, That the total enlisted strength of any of said arms of the service shall not include unassigned recruits therefor at depots or elsewhere, but such recruits shall at no time exceed by more than five per centum the total enlisted strength prescribed for such arms; and the enlisted men now or hereafter authorized by law for other branches of the military service shall be provided and maintained without any impairment of the enlisted strength prescribed for any of said arms.

The strength of the Army authorized under the provisions of the act of February 2, 1901, as modified by the joint resolution of March 17, 1916, is as follows:

Branches of service.	Enlisted men.
Quartermaster Corps.....	a 6,403
Medical Department.....	(b)
Corps of Engineers.....	1,982
Ordnance Department.....	1,115
Signal Corps.....	1,472
Cavalry.....	17,594
Field Artillery.....	6,358
Coast Artillery Corps.....	19,321
Infantry.....	54,443
Porto Rico Regiment of Infantry.....	599
United States Military Academy detachments.....	632
Recruiting parties, recruit depots, and unassigned recruits.....	6,006
United States Disciplinary Barracks guards.....	350
Service-school detachments.....	746
With disciplinary organizations.....	110
Mounted orderlies.....	7
Indian scouts.....	75
Total Regular Army.....	117,305
Philippine scouts.....	5,733
Aggregate.....	123,038

a Includes enlisted strength (6,000 men) of the Quartermaster Corps, which under the provisions of the act of Congress approved Aug. 24, 1912 (37 Stat. L., 543), are not to be counted as a part of the enlisted force provided by law. Under the provisions of the act of June 3, 1916, the enlisted strength of the Quartermaster Corps is included in the strength of the Regular Army.

b The act of June 3, 1916, provides that the enlisted strength of the Hospital Corps is not to be counted as a part of the enlisted strength of the Army, which is similar to the provision contained in the act of Mar. 1, 1857 (24 Stat. L., 435). The authorized strength of the Hospital Corps on June 30, 1916, was 5,388.

Recruiting.—For some time prior to the date of this enactment the general recruiting service had been so successful in keeping the Army filled to the strength then authorized that recruiting had been curtailed and at various times it had been found necessary to discontinue the acceptance of new applicants for enlistment in some arms of the service.

Anticipating the action of Congress in enacting the joint resolution of March 17, 1916, orders were given on March 13, 1916, to reopen recruiting stations that had been closed and to open additional ones in productive places and to prosecute the work of obtaining recruits for the Army without regard to hours. Recruiting officers circularized the population of the districts in which they were operating with special circulars showing the advantages of Army life and urging all qualified to avail themselves of those advantages.

An experienced sergeant in the recruiting service was detailed with the Government exhibit on the "Safety-first" train, which made a tour of the country during last spring and summer. Printed matter relating to the recruiting service was distributed in large quantities, including thousands of copies of the law enacted May 4, 1916, authorizing the appointment of cadets to the United States Military Academy from the ranks of the Army. This seemed to arouse a great deal of interest among a very desirable class of young men who visited the train.

All recruiting officers were also advised of the provisions of this law and instructed to give it the widest publicity possible.

A booklet setting forth the experiences of a recruit for the Army at a recruit depot was also published. It was prepared by a newspaper reporter who entered the recruit depot as a recruit and was afforded every opportunity to acquaint himself thoroughly with the manner in which the Army prepares its soldiers at recruit depots before sending them to their organizations. The author lived the life of a recruit at the depot, was granted no indulgences other than those extended to other recruits, and relates his experiences in a thoroughly unprejudiced manner.

Another publication issued by the recruiting service shows the various employments in civil life open to soldiers who have availed themselves of the many opportunities for vocational training afforded by the Army and have been discharged with a good char-

acter. It is contemplated to have the recruiting officers scattered throughout the country in the centers of population lend every assistance possible toward securing for honorably discharged soldiers employment in civil life in the various capacities set forth in the publication. It is hoped and believed that the fact made known through this publication that the Government does not lose interest in the former soldier upon his discharge from the service, but aids him in applying in civil life the vocational training he has acquired in the Army, will go a long way toward convincing the public that the term of service in the Army is a very desirable experience for any young man—an experience that will not only aid him physically and mentally, that will not only train him morally and manually, but that will also enable him to advance himself by reason of that mental and manual training in civil life after he shall have been separated from military service.

There has been an increase in the number of accepted applicants for enlistment since the passage of the joint resolution referred to, but it has not been as marked an increase as desired. This is undoubtedly due to several causes. The first and probably the principal cause is the present labor condition throughout the country. Recruiting officers from all sections report that never in their experience has there been the demand for labor in all lines of industry that exists and that has existed for the past several months. In the large manufacturing districts the demand for labor is far in excess of the supply. Wages are high and all who desire employment readily secure it. In the agricultural districts the demand for labor was active during the summer and early fall, and the supply was inadequate. Thus the recruiting service, which is simply one of many employers, has been unable to secure the recruits needed. However, during June, July, and August, 1916, the number of enlistments increased practically 175 per cent over the number for the corresponding months in 1915.

The National-Defense Act approved June 3, 1916, authorizes the President, in his discretion, to utilize the services of postmasters of the second, third, and fourth classes in procuring enlistments of recruits for the Army, and as a result of your action under this law all postmasters of the second, third, and fourth classes in the United States, estimated to be about 56,000, are now authorized to act as recruiting agents for the Army.

In addition to the duty of recruiting for the Regular Army, the recruiting service has been charged recently with the duty of recruiting for the Organized Militia mustered into the military service of the United States.

Authorized strength.—On June 30, 1916, the authorized strength of the Regular Army, including Medical Department, was 5,018 officers and 122,693 enlisted men; an increase of 184 officers and 25,445 enlisted men over the preceding year. In addition, the authorized strength of the Philippine Scouts was 182 officers and 5,733 enlisted men, the same as during the preceding year.

Actual strength.—On June 30, 1916, the actual strength of the Regular Army, including Medical Department, was 4,843 officers and 97,013 enlisted men; a total of 101,856, and an increase during the year of 227 officers and 1,248 enlisted men. In addition to this, the actual strength of the Philippine Scouts was 182 officers, the same as last year, and 5,603 enlisted men, an increase of 173 during the year.

On that date the Army, including the Philippine Scouts, was distributed geographically as follows:

Geographical distribution.	Officers.	Enlisted men.	Total.
In the United States ^a	3,622	67,416	71,038
In Alaska.....	23	769	792
In the Philippine Islands:			
Regular Army.....	480	11,404	11,884
Philippine Scouts.....	182	5,603	5,785
In China.....	41	1,233	1,274
In Porto Rico.....	35	679	714
In Hawaii.....	333	8,112	8,445
In the Canal Zone.....	253	6,846	7,099
Troops en route and officers at foreign stations.....	56	554	610
Total.....	• 5,025	102,616	107,641

^a Includes troops serving in Mexico.
^b Includes 154 first lieutenants of the Medical Reserve Corps.
^c Includes 4,670 enlisted men of the Medical Department.

Increased strength and organization provided by National-Defense Act.—The National-Defense Act of June 3, 1916, authorized a considerable increase in the national forces; the increase in the number of officers and enlisted men of the Regular Army to be made in five annual increments, beginning July 1, 1916. It provides for four classes of soldiers in the United States: First, the Regular Army; second, the National Guard; third, the Enlisted Reserve Corps; all of which shall exist in time of peace; and, fourth, the Volunteer Army, which shall be raised only in time of war. The peace strength of the Regular Army is fixed by the act at approximately 11,450

officers, including the 182 officers of the Philippine Scouts; not to exceed 175,000 troops of the line (including the Ordnance Department), approximately 42,750 noncombatant troops, including the unassigned recruits, and 5,733 Philippine Scouts, making a total of approximately 223,580. The total enlisted strength of the Medical Department is limited to 5 per cent of the total enlisted strength of the Army, and it can not be determined at this time because the strength of all the other staff corps and departments is not fixed. The National Guard will probably consist of about 17,000 officers and 440,000 men. The number of men who will join the Enlisted Reserve Corps can not be foretold. They are practically enlisted specialists for the technical departments of the Army recruited in time of peace for use in time of war only, and are subject in time of peace to short periods of training yearly. Volunteers can be called in time of war when and in such numbers as Congress shall authorize.

The maximum number of officers (war strength) of the Regular Army under the act is approximately 12,030, the additional 580 over peace strength being in the Medical Department. The exact number of officers authorized can not be given because the number of additional officers varies from time to time, and the number of retired officers that will be transferred to the active list under the provisions of the act of March 4, 1915, can not be foretold. The total maximum enlisted strength (war strength) of the Regular Army, including the Philippine Scouts, is approximately 298,000. This figure is based on total increases in the staff corps and departments in proportion to the increases authorized for the first increment.

The total number of officers authorized for the fiscal year 1917 is 7,252, including 182 officers of the Philippine Scouts.

By General Orders No. 50, September 23, 1916, as amended, the organization of the authorized enlisted strength of the Army, including the first increment under the act of June 3, 1916, was established as follows:

Infantry, 38 regiments.....	51, 224
Cavalry, 17 regiments.....	17, 857
Field Artillery, 9 regiments.....	7, 881
Engineers, 3 regiments and 1 mounted company.....	2, 198
Coast Artillery Corps.....	21, 423
Staff corps and departments.....	19, 224

Philippine Scouts	5, 783
Miscellaneous organizations and special allowances.....	13, 857

Total enlisted strength of the Army (including the Medical Department)	138, 897
Total enlisted strength of the Army, excluding the Medical Department..	132, 283
Total enlisted strength of the Army, excluding the Porto Rico Regiment, the Philippine Scouts, and the unassigned recruits, and including the Medical Department.....	123, 193
Total enlisted force of the line of the Regular Army, excluding the Philippine Scouts and the enlisted men of the Quartermaster Corps, of the Medical Department, and of the Signal Corps, and the unassigned recruits.....	106, 558

Actual increase.—The actual increase in the Army, provided as a part of the general legislation for preparedness, is as follows:

An increase in the Army of about 6,420 officers at minimum or peace strength and about 7,000 at maximum strength, and of about 142,000 enlisted men at minimum and about 170,000 at maximum strength, the increase to be made in five annual increments.—The Army will be increased 34½ regiments of Infantry, 10 regiments of Cavalry, 15 regiments of Field Artillery, 93 companies of Coast Artillery, 5 regiments of Engineers, 2 battalions of Mounted Engineers, the necessary number of auxiliary troops in the Medical Department, Quartermaster Corps, Signal Corps, and the unassigned recruits, and in addition thereto the number of Philippine Scouts that may be determined upon by the President, not to exceed a maximum of 12,000.

The number of general officers of the Army has been increased from 7 major generals and 17 brigadier generals to 11 major generals and 36 brigadier generals. This will provide the necessary general officers to command the divisions and brigades and furnish the general officers for the General Staff.

The General Staff Corps has been increased from 38 officers to 57 officers.

The Adjutant General's Department, the Inspector General's Department, the Judge Advocate General's Department, the Quartermaster Corps, the Medical Department, the Corps of Engineers, Ordnance Department, and Signal Corps have all been materially increased to meet the increased size of the Regular Army. There is nothing materially new in regard to these departments or corps.

The increase in the Regular Army will be made in five annual increments, beginning July 1, 1916, and running to July 1, 1920,

although the President is authorized to make the increase more rapidly in case of emergency.

The figures given above (except those quoted from General Orders No. 50) are approximate, and while based upon the best data obtainable at this time, are subject to material changes, because the strength of some of the staff corps and departments is not fixed by the act but is left to the discretion of the President to be fixed by him from time to time, in accordance with the needs of the service.

An officers' reserve corps; a reserve officers' training corps, and an enlisted reserve corps.—An officers' reserve corps is provided which will authorize the commissioning of civilians up to and including the grade of major in the various branches of the Army. These men can be selected and trained in time of peace, and the officers so obtained will be far better prepared than any volunteers that could be raised hurriedly at the outbreak of war. In order to obtain these reserve officers, a reserve officers' training corps is authorized which will consist of units at the various colleges, academies, and universities throughout the country where military education and training will be given which, in connection with six weeks' field training each summer, will give a personnel for the officers' reserve corps that is far better equipped for the duties of an officer than any heretofore available.

In order to provide the enlisted men for the various technical staff corps and departments, an enlisted reserve corps has been authorized, which will consist of men whose daily occupation in civil life specially fits them for duty in the Engineer, Signal, and Quartermaster Corps, and in the Ordnance and Medical Departments. This enlisted reserve corps will provide the railway operatives, bridge builders, chauffeurs, hospital attendants, nurses, telegraphers, etc., required for the departments and corps mentioned. It is impracticable to keep in the Regular Army the number of men of these classes that will be necessary in time of war, and the enlisted reserve corps will provide for the deficiency.

HEALTH AND SANITATION.

In the health statistics of the Army the calendar year is used. During the past year the health of the Army was excellent. There were no epidemics or unusual occurrences of infectious diseases.

Typhoid fever.—There were throughout the year but eight cases of typhoid fever in the entire Army, none of which resulted in death. This record is the more remarkable when it is considered that during the 14 months from May 1, 1898, to June 30, 1899, covering the period of the Spanish-American War, there were 2,774 deaths from typhoid fever, and that this disease was alone responsible for more than one-half of the entire disease mortality in the Army. The experience in 1898 was made the basis of an investigation into the matter of infection and dissemination of the disease in military camps, and from that time until now the medical department of the Army has waged a ceaseless battle against typhoid fever, culminating in the adoption of antityphoid vaccination, the results of which are even more striking than those following the introduction of vaccination against smallpox. Indeed, the success of science in this contest constitutes one of the most interesting and brilliant chapters in the history of preventive medicine.

Malarial fevers.—Malarial fever, formerly one of the largest contributors to the noneffective rate in the service, showed in the year under examination the lowest rate in the history of the Army. The record in the Philippine Islands is especially creditable, but in general it may be said that with the growth of sanitary knowledge this disabling group of disease is being brought under control.

The rate for tuberculosis was 3.49 per cent per 1,000, the lowest in the record of the Army, and real progress was made in the control of venereal disease.

The general decline in alcoholism throughout the country is seen in the Army in a steadily diminished rate during the past 15 years, and, while both in the matter of venereal disease and excessive alcoholic indulgence we are making obvious progress, I am entirely clear that the working out of the educational and recreational programs suggested elsewhere in this report will have a tendency to accelerate our progress in the prevention and restriction of these troubles. Both are caused by personal indulgence. Personal indulgence is stimulated by unoccupied and uninteresting leisure, and both are resisted by that sort of sound body and mind which result from a life lived under normal and wholesome circumstances and filled with an interesting variety of work and refreshment.

The health statistics of the Army are especially interesting, in view of the fact that they cover about 100,000 men having a far extended

field of action, distributed literally over two hemispheres, and therefore subject to epidemic contact and to the presence of contagion in foreign service, from which the civilian or nonmilitary population of the continental United States is more adequately protected by local sanitary safeguards.

Expedition into Mexico.—The expeditionary force which, in March, 1916, entered Mexico comprised troops of all branches, numbering approximately 10,000 men. During the several months of their stay these men have been under the most trying climatic and sanitary conditions, having to construct the sanitary appliances and facilities of their camps, and frequently being in stations where adequate water supply was difficult to secure. It is a matter of interest to note that the health of these troops is really remarkable. They have made plain their efficiency, and their noneffective rate has compared favorably with the best attained by home troops under garrison conditions.

The mobilization of the National Guard on the Mexican border presented to the medical staff of the Army a large and delicate problem. The men comprising these Guard regiments were drawn from all parts of the United States, from our great cities and from the rural districts, from high uplands and low valleys, from mountain and plain. They were transported at the height of the summer heat to the climate of southern Texas, to which few, if any, of them were in the least accustomed. They exchanged home life for crowded railroad trains and crowded railroad trains for hastily prepared camps. They underwent at once an immediate dietary change and as complete a change of habit and occupation. All of the facilities of the health service of the Army were at once devoted to sanitary and prophylactic measures for the safety of these men. The resources of the Department of Agriculture were generously and freely placed at the disposal of the War Department to aid in food examination and in the extermination of pests, which are nearly always the carriers of disease, with the astonishing result that the sick rate of the combined forces on the border since the mobilization has been less than 2 per cent. This is equivalent to a noneffective rate of 18 per 1,000. This I believe to be the lowest noneffective rate maintained in any similar body of men in our history, and I am told that it compares favorably with the best done by any country at any time. The credit therefor belongs primarily to commanding officers, the

Surgeon General and Quartermaster General and their associates. They have, however, been intelligently aided by the medical officers of the National Guard, and of course have had the hearty cooperation and support of the War Department and the use of all the facilities of the other departments of the Government which could contribute to the accomplishment of their task. The result is not only gratifying in that it shows what progress we have made in sanitary science in the Army, but it has given the country confidence in the ability of the military authorities to safeguard the health of soldiers, and an assurance that the inevitable casualty list of military operations will not be supplemented by the horrors of preventable sickness and death, as was formerly the case before preventive medicine had so far wrought its saving service to mankind.

ADDITIONAL LEGISLATION ENACTED FOR PREPAREDNESS.

Increase in number of cadets at the United States Military Academy.—The enlargement of the Army provided by the National Defense Act clearly called for an increase in the number of trained officers available for service. Experience both in our own Army and abroad has shown that while longer and longer periods of training are necessary to fit the soldier for his task in modern war the most serious delay in preparation for a great national emergency arises in the training of officers, who must have not only the vigorous health and hardened bodies of the soldier but technical knowledge of those new and mechanical implements which have been devised and are being devised for use in warfare. The officer must have too the discipline of mind which can both obey and command, and this sort of discipline comes only with training and experience.

The art of war under modern conditions engages vastly larger bodies of men and a more complete coordination of all the national resources than was formerly the case. Success may depend upon rapidity of transportation both of men and supplies. The use of railroads and of motor transportation has taken the place of the old-fashioned marching and maneuvering, and under modern conditions a smaller number of men moved by carefully prepared transportation facilities is sometimes enabled to mass its strength so as to overcome disparity of numbers. As no army is stronger than its supply train the dependence of any military force upon properly coordinated and efficiently served transportation facilities is obvious.

The implements of war have multiplied and we now have direct fire from the artillery, rifle fire from the infantry, and the cavalry reconnaissance and charge supplemented, if not replaced, by indirect artillery fire at vastly increased ranges, the high explosive shell, the machine gun, and the aeroplane. These added agents are the contributions of science to the art of war. They are scientific in their principles of construction and in their mode of use, and the whole art of war is as different from that practiced a few generations ago as the processes of higher mathematics are different from simple algebraic computations. The strength of the individual soldier has passed out of his arm and into his head, and as his art now depends upon intricate mechanical tools his skill must often be that of the trained mechanic and his knowledge that of the scientist. Especially are these higher requirements made of officers and the necessity for a longer period of training and for training of a finer kind is more and more apparent.

The United States Military Academy at West Point has almost from its origin ranked foremost among the military schools of the world. Its site is one of the most impressive in America, its equipment of buildings adequate, convenient, and inspiring in their beauty and suggestiveness. The officers educated there have made a body of men who from the beginning of the Republic have demonstrated the spirit of self-sacrifice for the preservation of the liberty of the country, and while many brilliant officers have come into the Army from civil life it remains true that the great body of officers needed in the Army have come from the Military Academy and in the future must be expected to secure their education and discipline there. As the art of war has grown more intricate special service schools have been established, in which young officers are gathered for courses, post-graduate in their nature, in the several arms of the service, and these schools deserve enlargement and encouragement at the hands of Congress. This, in my judgment, is especially true of the Engineer School for reasons to which I shall refer later, but the fundamental basis of the officers' education must for the greater part continue to be supplied at the Military Academy at West Point, and it is therefore fortunate that Congress, in the act approved May 4, 1916, has authorized an increase in the number of cadets and has made that increase in such fashion that it will fall gradually upon

the teaching facilities of the academy and enable it to absorb its increased work without confusion or loss of quality.

For a number of years the department had urged Congress to make some provision that would afford a wider opportunity for desirable young men with a taste for military life to secure appointments to West Point. It was pointed out that Congress had made large expenditures to build and equip this splendid educational institution, and that there was every reason why it should be operated and maintained at its maximum capacity.

By the terms of the act of May 4, 1916, the Corps of Cadets—

* * * shall hereafter consist of two for each congressional district, two from each Territory, four from the District of Columbia, two from natives of Porto Rico, four from each State at large, and eighty from the United States at large, twenty of whom shall be selected from among the honor graduates of educational institutions having officers of the Regular Army detailed as professors of military science and tactics under existing law or any law hereafter enacted for the detail of officers of the Regular Army to such institutions, and which institutions are designated as "honor schools" upon the determination of their relative standing at the last preceding annual inspection regularly made by the War Department. They shall be appointed by the President and shall, with the exception of the eighty appointed from the United States at large, be actual residents of the congressional or Territorial district, or of the District of Columbia, or of the Island of Porto Rico, or of the States, respectively, from which they purport to be appointed: *Provided*, That so much of the act of Congress approved March fourth, nineteen hundred and fifteen (Thirty-eighth Statutes at Large, page eleven hundred and twenty-eight), as provides for the admission of a successor to any cadet who shall have finished three years of his course at the academy be, and the same is hereby, repealed: *Provided further*, That the appointment of each member of the present Corps of Cadets is validated and confirmed.

SEC. 2. That the President is hereby authorized to appoint cadets to the United States Military Academy from among enlisted men in number as nearly equal as practicable of the Regular Army and the National Guard between the ages of nineteen and twenty-two years who have served as enlisted men not less than one year, to be selected under such regulations as the President may prescribe: *Provided*, That the total number so selected shall not exceed one hundred and eighty at any one time.

SEC. 3. That, under such regulations as the President shall prescribe, the increase in the number of cadets provided for by this act shall be divided into four annual increments, which shall be as nearly equal as practicable and be equitably distributed among the sources from which appointments are authorized.

The total number of cadets authorized prior to the passage of the act of May 4, 1916, was 668. The new act authorizes an increase of

664, to be made in four annual increments, so that the number of cadets authorized for the first year is 834; second year, 1,000; third year, 1,166; and for the fourth year, 1,332.

On September 1, 1916, the beginning of the current academic year, there were 769 cadets on the rolls, including 4 Filipino cadets and 2 foreign cadets, 1 from China and 1 from Cuba. Those cadets were divided among the four classes as follows: First class, 141; second class, 156; third class, 147; and fourth class, 325.

The usual examination of candidates for admission to the Military Academy was held at various military posts, beginning March 21, 1916. An additional examination was held, beginning June 6, 1916, to fill the 102 vacancies that existed after the regular examination, and also to fill the vacancies (166) in the first annual increment of the increase in the Corps of Cadets provided for by the act above quoted. Inasmuch as it became apparent that not enough cadets to fill the vacancies in the first increment would be obtained from this examination, it was decided to hold still another examination (physical) on June 27, 1916, mental qualification being by certificate only. The total number of candidates designated for the three examinations was 1,228. Of that number, 202 failed to report for examination; 12 declined appointment, their appointments were canceled, or they were prevented by sickness from reporting; 515 were rejected upon mental or physical examination, or upon both; 109 failed to complete the mental or physical examination, or both; 1 was refused admission because of cribbing; and (at the June 27 examination) 2 qualified physically and failed to submit educational certificates. There were no vacancies for 58 alternates and 5 candidates at large who qualified. The remaining 324 candidates were found qualified and were admitted to the academy. After the examination of June 27 there were 26 vacancies in the first increment.

The number of cadets authorized for 1916 is 834. There being 767 cadets on the rolls (excluding the 2 foreign cadets) on September 1, 1916, there was a total of 67 vacancies on that date. That number has been increased by resignations and death, so that the number of vacancies now is 77.

The training of citizens; Reserve Officers' Training Corps.—In addition to the provision made for an enlargement of the student body at the Military Academy, the country has witnessed a rapid

development of interest in citizen training. The reorganization and federalization of the militia, provided by the National-Defense Act, is in part a response to this impulse, but several interesting and promising experiments of a more novel kind are in progress. First of these is the establishment and maintenance at various educational institutions throughout the country of a reserve officers' training corps. By this means it is hoped to utilize the facilities of public and private educational institutions to give instruction to large bodies of students in the elements of military science and tactics. Officers of the Army are detailed to these institutions as professors. In 1915, 5,200 students who had completed courses of training under the supervision of officers were graduated from colleges, while the total number of students in colleges who had received some military instruction in that year under officers of the Army was 32,000. The total enrollment of male students in colleges to which this sort of instruction may be applied is about 170,000. By an enlargement and development of the plan it is hoped that a substantial portion of these students may be given the benefit of military instruction. An association of collegiate authorities for the consideration of this subject is working actively in harmony with the War Department and with the aid of the War College Division of the General Staff studies have been made which it is hoped will make this training increasingly acceptable and useful. Indeed, it may fairly be said that among the best educators of the country, the disciplinary value of elementary military instruction is coming to be realized and appreciated, and, without at all transforming our institutions of higher learning into military establishments, the spirit of order and devotion to the service of the country, which is the normal result of military discipline, is being inculcated into an increasing number of young men with results beneficial alike to the student body and to the institutions and with very promising results in the matter of preparedness against any emergency which may arise.

Vocational training in the Army.—This is a subject to which serious attention has been given, but its possibilities are only beginning to be developed. The primary purpose of the soldier when not in active operations is, of course, preparation for active operations;

but armies are made of young men, in a large number of cases a single enlistment only is served, and these young men with strong and vigorous bodies return to the commercial and industrial life of the Nation often to find themselves at a disadvantage in securing industrial or commercial employment, because other young men of their age have spent years in apprenticeship and are therefore more available and better trained. The Army posts of the Nation can not be suddenly converted into schools. So far a system of voluntary educational opportunity has been offered. In some posts substantial progress has been made, and the opportunity for progress is particularly present in the stations of the Coast Artillery, where the garrisons are more permanent than are the organizations of the mobile army.

The recent National-Defense Act provides on this subject:

In addition to military training soldiers while in the active service shall hereafter be given the opportunity to study and receive instruction upon educational lines of such character as to increase their military efficiency and enable them to return to civil life better equipped for industrial, commercial, and general business occupations. Civilian teachers may be employed to aid the Army officers in giving such instruction, and part of this instruction may consist of vocational education either in agriculture or the mechanic arts. The Secretary of War, with the approval of the President, shall prescribe rules and regulations for conducting the instruction herein provided for, and the Secretary of War shall have the power at all times to suspend, increase, or decrease the amount of such instruction offered as may in his judgment be consistent with the requirements of military instruction and service of the soldiers.

Under this provision consistent plans can be made, and highly beneficial results should follow.

Undoubtedly we shall come to a mode of Army life, which, while doing full justice to military drill and to that physical training so necessary to give the soldier a robust endurance of physical hardship, will at the same time afford him an opportunity to acquire mental training and manual skill, and at the same time round out his life with wholesome recreations and diversions, so that membership in the military forces of the Nation will have added to its patriotic usefulness a compensating opportunity for growth to the soldier and preparation for him which will make his nonmilitary years useful and happy.

Training camps.—Something over three years ago Maj. Gen. Leonard Wood, then Chief of Staff, put into operation a plan for camps of instruction at which students were permitted to attend for training without cost to the United States. The plan was later enlarged to permit the attendance of business men and has been carried forward year by year with increasing success and interest. During the present year the need for the Regular Army on the Mexican border has deprived these training camps of some of the officers and troops which would have been desirable as aids in the instruction and organization of the work; but in spite of this difficulty, five camps were held at Plattsburg, two at Oglethorpe, one at Fort Terry, six at Fort Wadsworth, in the Eastern Department, with a total attendance of 12,200 men and boys. In the Western Department camps were established at the Presidio and at American Lake. A satisfactory camp was held at San Antonio, Tex.; and in view of the recognition of this mode of training by Congress, it is safe to assume that much greater usefulness can be predicted for them in subsequent years, and that the field of selection of those applying to attend will be greatly enlarged by reason of the provision made for the payment of transportation and subsistence by the Federal Government for those who attend.

Council of National Defense.—The challenge of the European war brought the attention of Congress not merely to the necessity for an increase in the personnel of the Regular Army, provision for a larger supply of officers, and a better organization of the National Guard, but also to the fact that in any great national military emergency industrial mobilization was an indispensable element to success. Legislation was therefore enacted looking to an investigation of the financial, industrial, and commercial resources of the Nation and such prevision of them as would enable them to be speedily mobilized for the national defense. The most conspicuous step in this program was the creation of the Council of National Defense, consisting of the Secretaries of War, the Navy, the Interior, Agriculture, Commerce, and Labor, under whom, and upon whose nomination, the President is authorized to appoint an advisory commission of seven citizens qualified by the possession of special knowledge of the industrial and commercial resources of the country, and to this Council of National Defense,

advised by the advisory commission, is committed the task of coordinating the military, industrial, and commercial resources of the Nation in connection with its defense. Its duties are set forth in the act as follows:

It shall be the duty of the Council of National Defense to supervise and direct investigations and make recommendations to the President and the heads of executive departments as to the location of railroads with reference to the frontier of the United States, so as to render possible expeditious concentration of troops and supplies to points of defense; the coordination of military, industrial, and commercial purposes in the location of extensive highways and branch lines of railroad; the utilization of waterways; the mobilization of military and naval resources for defense; the increase of domestic production of articles and materials essential to the support of armies and of the people during the interruption of foreign commerce; the development of seagoing transportation; data as to amounts, location, methods, and means of production and availability of military supplies; the giving of information to producers and manufacturers as to the class of supplies needed by the military and other services of the Government, the requirements relating thereto, and the creation of relations which will render possible in time of need the immediate concentration and utilization of the resources of the Nation.

Power is given to the council to select a director who will be the executive officer, and an adequate appropriation is made for the employment of expert and clerical help, so that there will be established in Washington as an agency of the Government a central body which will catalogue the resources of the Nation and create such relations between our industrial and commercial agencies as will equip them to respond instantly to any call from the Government. In this way, the problems which in some countries had to be faced unforeseen until after a national emergency had arisen will be anticipated in the United States, and the confusion, delay, and loss due to haste in a moment of national danger will be obviated by rational, just, and timely provisions made in advance of trouble. It may well be that some part of the work of the council having a purely military usefulness will not be needed, but the general effect of such a plan in operation will be to produce more healthful and harmonious relations between the Government and business, and to give to the great industrial and commercial enterprises of the country a national and patriotic aspect, which will both keep the country prepared, should emergency arise, and stimulate sound business and industrial methods throughout the country. The Council of National Defense is authorized to

create commissions, subordinate to the advisory commission, for the study of special problems. Thus many committees of inquiry of a technical and scientific character, casually created heretofore for the consideration of special problems, will be able to be coordinated under the general direction of the council, and duplication of work and conflict of jurisdiction avoided. The act provides for reports to be made through the council to the President, and from the President to Congress, so that a great body of valuable and healthful information will undoubtedly result.

Progress in aviation.—Congress has recognized the great importance of aviation to the United States Army and has made this recognition effective by increasing the appropriations of the last fiscal year from \$300,000 to more than \$14,000,000 for the fiscal year ending June 30, 1917. It has enlarged the aviation personnel by increasing the commissioned force from 60 officers to 77 for the year 1917 and the enlisted men from 260 to 1,800. In addition, there have been provided for aviation, an officers' reserve corps and an enlisted reserve corps.

The project for the development of the aviation section contemplates 7 aero squadrons for the Regular Army, 12 squadrons for the National Guard divisions, and 5 for the defenses on both coasts besides aerostatic units for the mobile Army and Coast Artillery. The personnel for these will be made up from officers and enlisted men of the Regular Army, of the Reserve Corps, and of the National Guard units.

On May 20, 1916, Lieut. Col. George O. Squier, Signal Corps, assumed command of the aviation section. Since that date the general plan of administration has been to incorporate in the design and construction of equipment and in the system of training military aviators, lessons gained by experience in the present European war and in our own actual field experience in Mexico and elsewhere.

The problem of organization of the Army air service has been studied with a view to establishing a sound base which will lend itself to future expansion into an efficient service.

A thorough study of the aeroplane industry has been made by a technical board of officers and civilian engineers, to learn the productive capacity of the manufacturers in the United States. This was to insure that the War Department might obtain the best equip-

ment available and also to improve and develop the general design of aeroplanes of various necessary military types. In this latter connection the department has published specifications for the different types of military aeroplanes, endeavoring to incorporate in these specifications the requirements from the military standpoint and those lessons in design and construction learned from actual field experience.

Endeavor has been made toward the development of equipment for our military air service to meet conditions which are very similar to those that obtain in the European war and those peculiar to this country. Every effort has been made to improve power plants for aeroplanes. Bombs, bomb-dropping sights, special cameras, mounts for machine guns, automatic controlling devices, instruments for navigation, and for aid to the pilot, and many other accessories have been developed. A radio set has been developed which has transmitted messages across 140 miles.

In all this development the policy has been to endeavor to obtain assistance from the greatest civilian specialists in the country. Material assistance has been received from the National Advisory Committee for Aeronautics, the Bureau of Standards, and the American Society of Automobile Engineers, all of which have displayed a degree of interest which is extremely encouraging.

Orders have been placed (or proposals solicited) to date for military aeroplanes as follows:

Two-plane reconnoissance biplanes.....	91
Advance training aeroplanes.....	120
Primary training aeroplanes.....	34
One-plane pursuit aeroplanes.....	13
Two-plane reconnoissance hydroaeroplanes	155
Two-plane land combat aeroplanes.....	6
Total.....	419

Five captive balloons for field artillery fire control have been ordered.

Specially designed portable weatherproof hangars, machine shops, special trucks, and portable machine tools have been purchased, or ordered.

Schools conducted by competent personnel have been established at Mineola, Long Island, near New York City, and at Chicago, Ill., in addition to that already established and in operation at San

Diego, Cal. A base for equipping land squadrons and instructing in advanced military aviation has been established at San Antonio, Tex.

As a result of the training at these schools, the following have qualified since May 20, 1916, as junior military aviators:

At San Diego, Cal., officers of the Regular Army-----	22
At Mineola, Long Island, N. Y., officer of the National Guard of New York-----	1
Total -----	23

The following have qualified as reserve military aviators:

At Mineolo, Long Island, N. Y.:

Officers of the National Guard-----	3
Civillians-----	4
Total -----	7

In addition, the following students are at present under instruction:

At San Diego, Cal., officers of the Regular Army-----	38
At Mineola, Long Island, N. Y., officers of the National Guard-----	16
At Chicago, Ill.:	
Officer of the National Guard-----	1
Civillians-----	7
Total -----	62

The nucleus of a division to operate lighter-than-air craft has been established.

Procurement of military supplies.—Under the former law the Federal Government in time of war would have to enter the markets of the country to obtain ammunition, arms, and other supplies just as an individual would, but the new law authorizes the President in time of war to exercise a power analogous to that of eminent domain over the various manufacturing plants in the country and gives Government orders precedence over all private orders. Authority is also given to the Ordnance Department to prepare, in time of peace, the necessary gauges, jigs, dies, and other special tools required in the manufacture of arms and ammunition, and to give to specially equipped manufacturers educational orders which while limited in amount will insure private manufacturers having the necessary experience and force to enter rapidly upon the manufacture of munitions in the event of necessity. Congress authorized the appointment of a board to study and report to Congress upon the advisability of exclusive Government

manufacture of war materials. This board has been appointed and is proceeding with its investigation. No forecast can as yet be given of the conclusions, but the subject is one of very great importance. There are in the United States at the present time a great many industrial establishments which have turned aside from their ordinary business to the manufacture of war materials, and large plants have been established for this special object.

After the passage of the occasion for which these enterprises were established the difficulty will arise as to whether their facilities are to be transformed and devoted to other industrial uses or any part of them preserved in readiness for similar supplies for the United States. Some of these plants are located on the seacoast and others at more remote places. It will therefore be incumbent upon the department to select for patronage and encouragement certain of them, and in determining which are to be so chosen a variety of military considerations arise. It would seem, however, that with such facilities in existence it will be unwise to allow them to be dismantled, and the necessary large additions made to existing Government facilities which would be required to equip the Government to supply its own needs under war conditions, and as any war condition requires a mobilization of the entire industrial resources of the Nation there would seem to be no reason why munitions of war should be separated out for Government monopoly, unless that course should turn out to be necessary to prevent the appearance of prospective war profits as a disturbing element in the policy of the Nation.

Nitrate plant.—The National-Defense Act appropriates \$20,000,000 for the establishment of a nitrate plant. The manufacture of powder depends upon nitric acid, and the supply of nitric acid is in a large part based upon importations of Chile saltpeter. European Governments finding their supply of nitric acid from a similar source interrupted have resorted to the fixation of atmospheric nitrogen. As there is no adequate body of natural nitrate to be found among the mineral resources of the United States, Congress wisely provided for the establishment of a plant or plants upon which the United States could rely as an alternative to the foreign source which at present is the basis of all powder manufacturing in the country. Immediately after the making of the appropriation the department began a study

did not seem to work well, although its theory met with the approval of the War Department, and constant efforts were made both to broaden its scope and increase the efficiency of its operation. My immediate predecessor, Secretary of War Garrison, in his annual report for 1913, drew the analogy between the practice of industrial concerns and the Army, suggesting the tendency of mere seniority promotion to cause a lack of initiative and study on the part of officers. He very justly observed that there is a surprising amount of ambition and initiative in the Army, but that it is largely self-generated and receives very little stimulation from the promotion system. As a matter of fact, we see the same condition in civil life— young men of great ingenuity and devotion who are attending the postgraduate courses in our universities and are ordinarily required to do a piece of original research work as the basis of their pretensions to the degree of doctor of philosophy. They are filled with research zeal. When, however, they are through with their university course and undertake the daily grind of teaching in academic institutions, their separation from the inspiring university atmosphere and from daily association with others engaged in original work tends gradually to lull the impulse to investigation, and the task of original research is passed along to their successors at the universities, while they become drill masters, disciplinarians, and teachers, but not contributors to the original thought of their science.

The life of the Army officer when he is at the War College or in one of the service schools where military matters are the daily concern of a large number of brilliant men is full of that inspiration which maintains interest in the latest developments of military science. But as officers scatter to outlying Army posts, sometimes in the Tropics and sometimes in remote sections of the continental United States, the officer soon feels the loss of contact with other investigating minds, and if mere seniority is to continue to secure an orderly promotion for him which can neither be accelerated by his effort nor retarded by his inactivity, a substantial encouragement to development is lost. In response to considerations of this sort the act of June 3, 1916, extended the provisions of previous laws requiring examination to determine fitness of officers for promotion so as to include examination for promotion to all grades below that of brigadier general. Under the operations of this law there will be constantly before the mind of the officer the necessity of keeping him-

that an invasion of this field would probably not greatly increase the available stock of fertilizers in peace times, because it would not increase the actual nitrogen supply of the country but would merely divert a part of it, or all of it, at certain times into war materials. Of course, if the Government were to adopt this source, it would lead to a large increase in the by-product oven method of coking, and in that way the fertilizer supply would be augmented. The cyanamid process, which undoubtedly is the most useful from the point of view of fertilizer product, depends upon a large supply of electrical power and the proximity of certain mineral and shale bodies for its economic success. The arc process, which likewise depends upon the presence of a large supply of electrical power, is independent of mineral resources, but is less valuable in peace times as a source of fertilizer production.

We thus see that if either of the electrical processes are resorted to it will be necessary to select a site or sites for the production of hydro-electric power, and this selection will have to be made with a view to the accessibility of mineral elements needed for association in the peace and war time products of the plant, and the selection will also have to consider the location of the site with a view to its defense in the event of war and the readiness and economy with which its products can be distributed in war times to the military forces of the Nation and in peace times to the farming community which can be expected to use the fertilizer product. The subject is thus seen to be one of intricacy, and, while the solution of the questions presented has not yet been made, the studies being made are of such character as to insure a scientific treatment of the question and a careful and effective use of the funds appropriated by Congress for this important object.

Examinations for promotion.—As early as October 1, 1890, Mr. Redfield Proctor, Secretary of War, advocated in his annual report and secured the enactment of a measure providing a system of examination for all officers of the Army below the rank of major and making the right to promotion conditional thereon. The theory which has long obtained in the Army, of promotion by seniority, was not disturbed except that the requirement of a successful examination was made an additional condition precedent, the examinations not being competitive but qualifying. The law

did not seem to work well, although its theory met with the approval of the War Department, and constant efforts were made both to broaden its scope and increase the efficiency of its operation. My immediate predecessor, Secretary of War Garrison, in his annual report for 1913, drew the analogy between the practice of industrial concerns and the Army, suggesting the tendency of mere seniority promotion to cause a lack of initiative and study on the part of officers. He very justly observed that there is a surprising amount of ambition and initiative in the Army, but that it is largely self-generated and receives very little stimulation from the promotion system. As a matter of fact, we see the same condition in civil life— young men of great ingenuity and devotion who are attending the postgraduate courses in our universities and are ordinarily required to do a piece of original research work as the basis of their pretensions to the degree of doctor of philosophy. They are filled with research zeal. When, however, they are through with their university course and undertake the daily grind of teaching in academic institutions, their separation from the inspiring university atmosphere and from daily association with others engaged in original work tends gradually to lull the impulse to investigation, and the task of original research is passed along to their successors at the universities, while they become drill masters, disciplinarians, and teachers, but not contributors to the original thought of their science.

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self abreast of the developments in military matters and of not allowing his general education to stagnate or be lost in a dull routine of disciplinary observances. The law ought not to be harshly employed, but in the normal development of its operation eliminations will take place of officers who have lost interest in their career and in the development of military science, and a certain minimum of growth will become a fixed requirement as officers advance in the service to positions of larger responsibility.

• *Revision of the Articles of War.*—From the point of view of the daily discipline and control of the Army, perhaps no step in recent years has been more helpful than the revision of the Articles of War, enacted into law as a part of the Army appropriation act approved August 29, 1916. For many years the Army has felt that the Articles of War needed revision. Many of these articles have remained unchanged for a century, while new theories of discipline have been current in all the civilized countries of the world, and in our own country profound modifications have taken place in the administration of both civil and criminal law. The extension of the field of operations of the Army of the United States beyond our continental borders and other changes in the domestic and international situation of the United States have presented conditions which the old articles were not adapted to meet. The revision of the articles, therefore, was most needed, and the work of the Judge Advocate General in preparing the revised articles is a singularly able piece of work, introducing needed reforms, and throughout characterized by moderation and a conservative attitude toward an established and well-understood disciplinary system.

Revision of military laws.—The act of August 29, 1916, further directs a revision and codification of all the military laws of the country. This is a large and difficult task and yet one very necessary to be performed. For many years Congress has enacted a great variety of laws, some of them directly military in character and others touching the Military Establishment only at a tangent, so that scattered through the statutes is a lot of piecemeal legislation requiring the most expert and trained knowledge for its use. It will be a great advance in the conduct of the Military Establishment to have all of these laws brought together, placed in their true relation to one another, their accidental conflicts eliminated, and a consistent and

plain body of laws erected for the guidance of those who come within the scope and operation of our so-called military laws. It is my hope that this code can be submitted to Congress at an early day, and while the Congress will undoubtedly find it necessary carefully to examine the work before giving its approval, it will be presented in a form which will show that the effort has been to omit obsolete and redundant matter without substantially changing the effect of existing law except in such obvious cases as will appeal at once to the lawmaking body.

MILITARY TRAINING IN HIGH SCHOOLS.

The statement made by the War College Division of the General Staff entitled "A Statement of a Proper Military Policy for the United States," gave us some idea of the size of an army which would be needed in this country in the event of any serious emergency. As one contribution to the preparation of the necessary number of men, a proper system of training for high schools was developed by Capt. E. Z. Steever and applied with marked success in the public high schools of the State of Wyoming. The Steever plan has come to be known as the "Wyoming plan." It has been extensively written up in periodicals of general circulation and interest, and requests come almost daily to the War Department for the services of Capt. Steever to introduce the system into the public secondary schools. The plan embraces the preparation of a high-school boy in military, moral, civic, business, and educational equipment, and its fundamental basis rests upon the natural evolution of leadership among boys and the value of organization and coordination in groups of young men. The system can not be said to compete with recognized athletic diversions, but it offers opportunities for larger masses and spreads its benefit in the physical training over wider areas than is possible under the intensive form which modern athletics has taken. The entire enlistment is voluntary and the exercises are carefully adjusted so as not to compete or interfere with the normal academic work of the school. The exercises are only in part directly military and are designed to stimulate the interest of all normal and healthy boys, thus affording an invitation to those who are not normally the most fit physically to develop vigorous, sturdy bodies, with clean minds and ordered and disciplined habits.

There is just enough of a soldier aspect to teach constantly the lesson of the obligation of the citizen to serve the State in a crisis, and under the wise restraints which have been introduced into the system even the most devoted adherents of peaceful policies for our Government have not felt that there was any danger of the development of a militarist attitude in the student body.

GENERAL STAFF CORPS.

Duties and functions as prescribed by National-Defense Act.—The act for making further and more effectual provision for the national defense, and other purposes, approved June 3, 1916, provided many enlargements and changes in the Army. A large part of the discussion in Congress and of the illustrative and preparatory work in the War Department had been done prior to my assumption of the duties of Secretary of War. Some questions as to the results of this act, however, and of the intention of Congress in passing it arose for almost immediate consideration and required a careful historical study of Army legislation covering a long period of years. None of these questions was more important or difficult than that affecting the organization of the General Staff and the relation of the Chief of Staff alike to the Secretary and the Army.

For many years the superior military authority in the Army was vested in the Commanding General of the Army. The embarrassments attending the somewhat uncertain duties of that officer and the growth of the principal staff organizations in the armies of other countries sharply directed the attention of various Secretaries of War to the need of a reorganization, and the first step in that direction was taken by the creation of the Army War College Board, which Secretary Root described to be as near an approach to the establishment of the General Staff as was practicable under the law existing in 1899. In 1901 Secretary Root, in his report, formally urged the establishment by law of the General Staff, of which the War College Board should form a part. In his annual report for 1902 Secretary Root again urged his recommendation, saying:

Our military system is, however, still exceedingly defective at the top. We have a personnel unsurpassed anywhere. * * * We have the different branches of the military service well organized, each within itself for the performance of its duty; our administrative staff and supply departments have

at their heads good and competent men, faithful to their duty, each attending assiduously to the business of his department; but when we come to the co-ordination and direction of all these means and agencies of warfare, so that all parts of the machine shall work true together, we are weak. Our system makes no adequate provision for the directing brain which every army must have to work successfully. Common experience has shown that this can not be furnished by any single man without assistants, and that it requires a body of officers working together with the direction of a chief, and entirely separate from the Army. * * * This body of officers in distinction from the administrative staff has come to be called a general staff.

The subject thus presented was very fully and earnestly considered by the Military Committees of the two Houses, and resulted in the passage of the act of February 14, 1903, which abolished the separate office of Commanding General of the Army, provided for a military Chief of Staff, who, under the direction of the President or of the Secretary of War, representing him, should have supervision not only of all troops of the line, but of the special staff and supply departments, which theretofore had reported directly to the Secretary of War, and it created for the assistance of the Chief of Staff a corps of 44 officers who were relieved from all other duties. The inauguration of this system was a complete and fundamental change in the administration of the War Department. It was not unnaturally attended by some misunderstanding and difficulties, growing out of the transfer of authority and independence from a series of uncoordinated administrative staff officers into a harmonized and coordinated body under the supervision and control of a single military officer. The embarrassing question constantly presented itself as to just how far the functions of the Chief of Staff invaded the administrative independence of various bureau chiefs, and, while the question was always considered in a fair and tolerant spirit, it sometimes became the basis of anxious controversy, if not misunderstanding.

In the act of June 3, 1916, and particularly in section 5 of that act, some language was introduced by Congress apparently for the purpose of setting at rest some of this misunderstanding. Unhappily, however, doubt immediately arose as to the scope, effect, and intention of the language so employed. One possible view of its meaning would have in effect limited the Chief of the General Staff and his associates to the consideration of more or less abstract questions of military policy and would have deprived him of that basis of

knowledge necessary for the performance of any coordinating function. In effect, this would have been a return to the old system of more or less independent bureau organizations reporting to and dealing directly with the Secretary of War and coordinated only to the extent that his personal information enabled him to effect such a result. It would, of course, have left the Chief of Staff and the General Staff in existence, but would have limited their functions practically to the work originally undertaken by the War College Board, and later by the War College Division of the General Staff. Since Congress had apparently addressed its attention to this subject and had used some new language, it became important very earnestly to inquire just what the legislation intended to accomplish and how far the interpretation above suggested as possible was necessitated by the language used.

As this question is one of far-reaching importance, I take the liberty of attaching to this report as Appendix A the decision of the Secretary of War¹ on the effect of section 5 of the National-Defense Act, in which the subject is examined with critical care and the conclusion reached that—

The structure [General Staff] erected by the act of 1903 remains as then created, except for the explicit modifications provided in the act of 1916.

And—

That the Chief of the General Staff is charged with the supervision of the various departments, bureaus, and offices of the War Department for the purpose of coordinating their activities and for the purpose of so informing the judgment of the Secretary of War that he may not by inadvertence or unfamiliarity with military practice take action which would be prejudicial to harmonious results in the military service.

This conclusion was reached by a study of the language actually used, which, after all, was merely a prohibition upon the officers detailed into the General Staff Corps from the performance of administrative duties and was in no expressed sense a repeal of any of the earlier legislation which subjected the administrative staff officers to the supervising, coordinating, and informing powers reposed in the members of the General Staff Corps by the act of 1903. It seemed entirely clear to me that had the Congress intended a larger effect for

¹ The able opinion of the Judge Advocate General on this question is attached as a part of Appendix A, so that the perplexity of the question from both points of view may be seen.

its language it would not have been content to leave that effect to inference and expanded definitions of terms ordinarily having much more limited meaning. The result of all the legislation, therefore, including the provisions of the act of June 3, 1916, dealing with this subject seemed to me to be that Congress has adhered to the policy inaugurated in 1903, that it continues to recognize the wisdom of a General Staff in the American Army, and that not a staff for the academic consideration of theoretical problems, but such a staff as can, on the basis of intimate acquaintance with both the War Department bureaus and the Army at large, act as a coordinating and reconciling agency. The considerations which moved Congress to the passage of the act of 1903 were of the weightiest character. Foreign experience, which was then considered determinative of proper military policy in this regard, has since that time become more conclusively persuasive in the same direction, and I am clear that any abandonment of the theory of the General Staff, or any diminution of the coordinating power of the Chief of the General Staff, would be a backward step and would scatter the military energies of our Army, which are now so happily concentrated and coordinated. It is proper to be remembered in this connection that the Chief of the General Staff bears a more personal relation to the Secretary of War and, through him, to the President than is borne by any other officer in the Army. The occupant of the office changes at the will of the Secretary of War, and in order that the policy of the President may be aptly and sympathetically impressed upon the military establishment, it seems imperative that there should be continued in the Chief of Staff the largest power of supervision and that he should be enabled to keep constantly informed, even in detail, as to the operations of the various subdivisions of the military activities of the department, so that the Secretary of War may rely upon him in an immediate and personal sense for advice which is based upon a view of the whole Army rather than upon the advice, however frank and disinterested, of individuals whose chief interests are associated with subdivisions of, or specialties in, the service.

Having reached a definite opinion as to the intention of Congress, I have directed obedience to that intention by a continuation of the policy established immediately upon the passage of the act of 1903, and this result, I am confident, will be regarded by the Army as conducive to its growth in efficiency and to the establishment of har-

monious and just relations between the various elements of the service.

Number of officers required.—At the time of the creation of the General Staff Corps the number of officers at first detailed thereto was fixed at 45 as the proper number to perform this new and somewhat experimental duty. In 1912 the General Staff was reduced by one general officer and eight captains. The reduction so seriously interfered with the work of the General Staff as to cause a special emphasis to be laid by the department in its recommendations to Congress on the subject. Having an intimate knowledge of the increase and development of its own functions and possibilities of usefulness, the General Staff recommended 94 as the number that should compose that body. The new National-Defense Act as passed by the Senate fixed the number at 92, but when the bill emerged from conference, the General Staff, aside from its general officers, was increased by 18 officers only, and they were to come, like the other increases authorized for the Army, in five annual increments. And the National-Defense Act further provided that not more than one-half of the officers detailed in the General Staff Corps shall at any time be stationed or assigned to or employed upon any duty in or near the District of Columbia. It seems quite clear that the law as thus enacted leaves the General Staff Corps insufficiently provided for, so far as numbers are concerned, and the department is embarrassed in the selection of suitable officers for this most important duty, both by the restriction prohibiting the assignment to duty in or near Washington of more than one-half of the corps and also by the detached-service law and other restrictions which limit choice. The detached-service law was a part of the appropriation act for the Army approved August 24, 1912, and requires that commissioned officers of the line of the Army below the rank of major shall not be detached unless they have been actually present for duty for at least two of the last preceding six years with troops of that branch of the service in which the officer in question is commissioned.

With the purpose of this law I have complete sympathy, in that it is an effort to require the return of officers to service with troops at such frequent intervals as to assure knowledge of troop conditions and line service in those who are from time to time detached for special and expert work. It seems to be a very safe generalization that all officers of the Army, with the possible exception of a very few

performing highly specialized service, ought to be returned to service with troops from time to time, so that their details, or periods of detachment, will be refreshed by knowledge of actual army conditions. But I doubt the wisdom of allowing this principle to limit the choice of the department in the selection of officers for the General Staff. The duties of that body are of such paramount importance to the success of the whole military establishment that the War Department ought to be free from any arbitrary restriction in reaching out into the service at any time for the man or men best qualified to perform this central and pivotal function.

A board of officers was recently constituted in the War Department to recommend for selection the necessary number of officers to fill vacancies in the General Staff. The board reports that it—

was seriously handicapped by the fact that many of the officers whom it considered eminently fit were either on the detached officers' list, on duty in the Philippines with a considerable period to serve, or were within one year of their promotion, or detailed in other staff departments.

Undoubtedly the difficulty here sought to be solved by Congress is a real one. Washington, being the Capital and the seat of the War Department, is a desirable place of residence for officers of the Army, and, where personal preference is allowed to control, undoubtedly the tendency will be, for one reason or another, to allow too large a number of officers in Washington, at the expense of an adequate officering of outlying posts. It would seem, however, that, in view of the firmly established theory and practice of the dominance of the Chief of the General Staff and his supervision over and coordination of all the various branches of the military establishment, the power might safely be left to the Secretary of War to set aside in individual cases restrictions of this kind in the interest of the most efficient organization of the General Staff Corps. Incidentally it may be remarked that these restrictive provisions impose upon the Government a very substantial increase in the expense of the military establishment, requiring, as they do, arbitrarily, frequent changes in the assignment of officers, and their transportation from place to place.

SCIENTIFIC MANAGEMENT.

The supplies of the Army are in part purchased in the open market and under contract and in part manufactured in Government arsenals. The question of the relation between the Government as em-

ployer and its employees in these arsenals is a part of the general labor question of the country. The theory which the department attempts to follow is, in general terms, that the Government should be the model employer, and to a large extent this theory is successfully applied. In the matter of hours of labor, sanitary conditions, holidays, and sick leave there is perhaps no better industrial condition in the United States than that maintained by the War Department in these industrial plants. The question of wages and the basis of wages is, however, under more or less constant discussion. Roughly speaking, the department undertakes to establish wage rates by determination of the prevailing rate of wages in similar employments within the district in which the particular arsenal is located, and it uses Bureau of Labor statistics of the Department of Labor in selecting the territory which shall comprise the district and in determining rates of wages for similar work. The result is that the employees of the Government receive the prevailing rate of wage in their respective occupations, but usually for a day of shorter hours than is observed in the private industries from which the information is drawn, and clearly for work done under conditions much more favorable to the public employee than to the private employee. The difficulty in this whole matter, however, arises from the use of more or less arbitrary methods for piecework and day wage determination. Many efforts have been made to introduce just principles into this delicate determination. A system of time studies and premiums known as the "Taylor system" was adopted in part in some of the arsenals, but it met with the opposition of organized labor and Congress prohibited the use of the system. We have been obliged, therefore, to fall back upon the less scientific and less just methods previously employed.

It seems without doubt that an efficiency system properly constructed and justly applied is fairer alike to the Government and to the employee than any more haphazard method. The objection of organized labor is not unnatural; it proceeds from the belief that all efficiency systems tend to become "speeding-up" systems and that their logical operation increases the output without a corresponding increase of wage. This, however, must, of course, be due to the method of applying the system rather than to the system itself, and after examining the results obtained in Government arsenals where the system was in whole or in part followed, I am persuaded that

no such evil effects as these were permitted to occur. How far the action of Congress was dictated by a belief that efficiency systems inevitably tended to the enervation of the employee I have not the means of knowing, nor do I know what evidences of such results in private establishments were considered, but under the law as it now is the department is prohibited from using time studies and premiums, and is therefore deprived of the means of acquiring the sort of knowledge without which just wage regulation is impossible, or of offering inducements to zeal and good workmanship, which if offered in moderation constitute a just recognition of individual skill and energy. My own belief is that most of the difficulties which have been felt to inhere in efficiency systems arise from the fact that they are employers' systems and that the employee has no voice nor part either in the making or application of the systems. We are unhappily prevented by existing legislation from any experiments. Were it otherwise I would be much interested to discover, if possible, a plan by which the Government and its employees might cooperate in the devising and application of methods fair to both for the determination of relative skill and zeal among operatives, which would at the same time protect the interests of the Government as employer, and while conserving the strength and energy of the employees distribute justly among them the rewards of faithful service.

SUGGESTED LEGISLATION.

Engineer School.—I have referred above to the special-service schools already established in the Army to supplement with post-graduate courses the fundamental training given to officers at West Point. The Army War College is, of course, one of these and devotes its teaching force to the study of the principles of strategy and military policy. The service schools seek to specialize in their particular branches of the service, and the rapidity with which new implements of war are developing and their highly scientific character make it increasingly important that special study should be given to such subjects as precision in indirect Artillery fire, the use of the machine gun, the modern uses of Cavalry and military aviation. To one of these schools, however, I desire to ask particular attention. The Engineer Corps of the Army for many years comprised a large part of the most eminent engineering talent in the

country. Its officers are still men of great distinction and ability, but the science of engineering in its various aspects has become fundamental to the entire industrial life of the Nation. The civil, electrical, mechanical, and chemical engineer is to be found in every great industry, and the rewards offered in civil life to the engineer are now attractive in the highest degree. It is very necessary that the Army should be continuously supplied with well-trained engineers.

The peace-time occupations of the War Department and of the Army rest in a high degree upon the Engineer force, and the great problems of river and harbor improvement and development for the promotion of navigation and for the conservation of the water power of the country are in the hands of that corps. Of course, in war the engineer, as bridge builder, road maker, builder of fortifications, and a variety of other construction enterprises, is essential to military success. But the science of engineering, like all other sciences nowadays, is rapidly developing. Every new application of scientific principles to industry affects the engineer, and it is of the highest importance that the Engineer Corps of the Army should continue to contain a progressive, highly trained body of men thoroughly abreast of all the developments in science applicable alike to those engineering functions of the Government in times of peace and to the great call made upon the engineer in times of war. The Engineer School maintained at the Washington barracks seems to me an inadequate response to this obvious need, and I trust the attention of Congress can at some suitable time be called to the wisdom of providing facilities for original research and continuous and fundamental training for our body of engineers, that will keep them in the very forefront of engineering science.

National preparatory schools.—The suggestion made with regard to preparatory military schools is, of course, independent of the widespread movement for vocational training in the Army heretofore mentioned.

The method of selection of cadets for West Point has for years consisted of designation by the President, Senators, and Representatives, with examination as a prerequisite to acceptance; but we are learning daily that a nation efficiently organized from a military point of view must of necessity be efficiently organized industrially. We are learning also that the ideal military preparation of any country is

one which is readily expanded in an emergency so as to include great numbers of men in the industrial and commercial life of the nation who have had enough preliminary training to make them convertible by brief additional training into officers. Should the United States ever be called upon to meet a great military emergency a large army would have to be sustained and supported by a highly coordinated industrial system. There should therefore be in the country at all times a great body of men trained as mechanics, whose places in such an emergency would be not in the ranks of the fighting forces but at the lathes and forges from which the ammunition supply of the Army must be drawn. I venture to believe that if the Federal Government were to establish in a number of places throughout the country schools preparatory to the Military Academy at West Point and the Naval Academy at Annapolis, in which the rudiments of a sound education, the elements of mechanical skill, the principles of business coordination, and the beginnings of military science were taught, these schools would develop the natural aptitudes of the students in such a way as to supply those fittest by temperament and talent to pursue in the Military Academy and the Naval Academy the study of military science; and incidentally these schools would furnish a great body of men returning to civil life fitted by training either to respond in an emergency to a call to the colors or to take their places as civil soldiers in the service of the Government in those industries and undertakings fundamental to the successful conduct of military operations.

The suggestion here made ought not perhaps to be further elaborated in this report, but I think it will be apparent on reflection that no expenditure in contemplation of a great military emergency would be more apt or helpful than one which gave to 25,000 or 30,000 young men the inspiration of industrial education at the hands of the Government, indoctrinated them with the spirit of service to their country, and tabulated them so that they would be always available for either the military or industrial service which their academic experience indicated most in accordance with their aptitudes. It seems equally likely that schools of this sort would spread the field of selection ideally over the country and make the cadets at West Point and midshipmen at Annapolis bodies of

young men selected by a demonstration of their special aptitude for the pursuit of military service.

THE BOARD OF ORDNANCE AND FORTIFICATION.

The Board of Ordnance and Fortification is one of the most important standing boards of the War Department. It meets weekly for the consideration of questions affecting the fortifications of the United States and the arming of our forces with suitable implements of war. Scientific discoveries and invention are being made on every hand under the stimulus of the world war, and this board endeavors to keep abreast of the progress made throughout the world, to consider and weigh the claims of inventors and the possible applications of science to warfare, to the end that our Army may be provided with equipment of the best, at least to the extent possible under the appropriations made by Congress for the purpose. I do not undertake to give any detailed account of the operations of the board, but two or three subjects considered by it are sufficiently interesting for passing comment.

During the past fiscal year the Board of Ordnance and Fortification has conducted important tests at Fort Morgan, Ala., in cooperation with the Navy, to determine the effect of hostile gunfire on our coast fortifications. An experimental emplacement with a gun mounted on a disappearing carriage was fired upon by ships with their heaviest guns at varying ranges. These tests were conducted in the presence of members of the board and accomplished the purpose for which they were made.

Hammond radiodynamic system of torpedo control.—Further study and tests of an apparatus for the control of submarine torpedoes by radio, which had been under consideration by the board since the early part of 1913, had resulted in a recommendation by the board on February 12, 1915, for the purchase of all the secrets, patents, and developed methods pertaining to the Hammond radiodynamic system of torpedo control. This recommendation was renewed by the board at its meeting on February 15, 1916, and was supported in hearings before congressional committees. Appropriations were made for the purchase of the rights to the invention and the installation of one unit of the system, subject to the approval by the President after a satisfactory demonstration before a board

of three Army and three Navy officers. This board has been named, and preparations for the test are in progress.

The board has also been engaged in the development of railway mounts for certain types of ordnance, motor trucks, armored cars, serial photography, searchlights, and flare bombs, and in the development and test of the radio control of torpedoes from an aeroplane in flight under the Hammond system.

Development of a portable searchlight for field artillery, inaugurated in 1906, was finally completed and the searchlight turned over to the Field Artillery Board for test.

MACHINE GUNS.

Perhaps no invention has more profoundly modified the art of war than the machine gun. In the European war this arm has been brought into very great prominence. It had, however, been developed to a serviceable state at the time of the Spanish-American War, although its use on a large scale had not been developed in any army until the outbreak of the European war. In 1912 Congress by an appropriation sanctioned the allowance of the War Department of four machine guns per regiment. From time to time tests have been made by the War Department to determine the relative serviceableness and efficiency of various machine guns. These tests have been attended by considerable controversy and the claims of different types of machine guns have been urged upon the public attention by widespread newspaper comment. In the meantime, in response to the stimulus of the European war, inventors and makers have hastened to develop and improve their respective arms and the field of selection has constantly widened so that when the Congress at the last session appropriated \$12,000,000 for the procurement of machine guns it seemed important, for obvious reasons, to free the air of the various controversies and to set at rest in as final a fashion as possible the conflicting claims of makers and inventors. A board was therefore created in the War Department, made up in part of officers and in part of civilians, all of whom were selected so as to avoid any suggestion of prejudice on their part growing out of previous controversies and tests.

The board was instructed to take into consideration all tests previously made and to collate and study the European experience and

hear from the representatives of all makers, and to conduct under its own guidance such tests as in its judgment were necessary or appropriate to a final determination of the present state of the art. On the basis of this sort of an investigation, the board was instructed to advise the department on the expenditure of the \$12,000,000 appropriated for this purpose. A preliminary report has been made by this board, selecting the Vickers-Maxim type for heavy machine guns, recommending the purchase of a large supply of them, and fixing a date in May at which time exhaustive tests to determine the relative excellence of various types of light machine guns are to be made. The nature of military operations plainly dictates that our Army should be supplied in some proportion with guns of a heavy and of a light type for defensive operations. From fixed points the heavier type is doubtless the more reliable, but in rapid charging and field operations and in aeroplane work the mobility of the arm is an important consideration. It is therefore highly important that the Army should be supplied with an adequate number of both types of arm. The recommendations of the board already made recognize the wisdom of this course, and its conclusions when finally reached will no doubt be accepted as authoritative, although this is the field of most rapid advance in the perfection of arms, and the department will welcome each improvement and seek to avail itself of the progress made so that our equipment can at all times be of the most modern and effective kind.

THE PHILIPPINE GOVERNMENT.

Governor General Harrison's administration has continued to be marked by cordial relations between the executive and legislative branches of the government and between the upper appointive house of the legislature and the lower house. The recommendations of the Governor General to the legislature have been promptly formulated into law. The legislature passed satisfactory appropriation bills and imposed additional taxes to meet decreases in the revenues as the result of the European war.

Progress among the Moros and other non-Christians in the Department of Mindanao and Sulu, where Gov. Carpenter has continued in office, has exceeded the most sanguine anticipation.

Peace and good order have so marked the administration of Governor General Harrison that it should be unnecessary hereafter

in official reports to mention these subjects, of such frequent reference in past reports of the Philippine Islands.

The financial condition of the government is excellent.

Detailed information with reference to our government in the Philippine Islands will be found in the annual reports of the Governor General and the Philippine Commission and of the Bureau of Insular Affairs of the War Department, transmitted with this report.

Congress at its last session was most attentive to the recommendations of the Philippine government and of this department with reference thereto. In addition to making effective several of the less important recommendations, it enacted the new Philippine organic act, which was approved by the President on August 29, 1916. While there has been continuous progress in the development of the Philippines toward self-government during American occupation, this is the first step of importance that Congress has taken in recognition of this development since the passage in 1902 of the act for the temporary government of the Philippine Islands.

PORTO RICO.

The past year has been one of marked prosperity in the industries of Porto Rico, particularly in what has become by far the greatest industry, the production of sugar.

There was natural disappointment in Porto Rico at the failure to secure the enactment by Congress at its last session of the proposed new organic act. It passed the House of Representatives, but failed to receive consideration by the Senate, and is still pending. It is hoped that at the coming session of Congress this act will be passed. It may be said now to have been pending for six years, since the House of Representatives in 1910 passed a bill which embodied the most important features of the pending bill. The disappointment of the Porto Rican people is greatest because of the continued failure to grant to them American citizenship, an aspiration in which they have been encouraged by every President of the United States since 1905.

The progress of the government and people of Porto Rico is set forth fully in the annual report of the governor, transmitted herewith.

THE PANAMA CANAL.

The Panama Canal has been opened to commerce since August 15, 1914. However, on account of slides, the canal was closed to traffic from September 18, 1915, to April 15, 1916. The governor of the Panama Canal, in his last annual report, has again reported very fully on the slide situation and corrects many misapprehensions that exist concerning conditions on the Isthmus. He is confident that the slides will be overcome finally and for all time, and that there will be no further serious interruptions to traffic.

These same general conclusions were also reached by a committee of the National Academy of Sciences, appointed at your request, from which I quote the following paragraph from the preliminary report made by that committee:

The committee looks to the future of the canal with confidence. It is not unmindful of the labor necessary to deal with the present slides; and it realizes that slides may be a considerable, but not an unreasonably large, maintenance charge upon the canal for a number of years; it also realizes that trouble in the Culebra district may possibly again close the canal. Nevertheless, the committee firmly believes that, after the present difficulties have been overcome, navigation through the canal is not likely again to be seriously interrupted. There is absolutely no justification for the statement that traffic will be repeatedly interrupted during long periods for years to come. The canal will serve the great purpose for which it was constructed, and the realization of that purpose in the near future is assured.

During the part of the fiscal year that the canal was open to traffic, 411 vessels passed from the Atlantic to the Pacific, with a total net tonnage of 1,308,230 tons and 1,434,236 cargo tons. Of this total number of vessels, 50 were engaged in United States coastwise trade, with a net tonnage of 183,372 tons and a cargo tonnage of 227,103 tons. Three hundred and seventy-six vessels passed from the Pacific to the Atlantic, with a total net tonnage of 1,171,531 tons and a cargo tonnage of 1,705,810 tons. Of this number of vessels, 41 were engaged in the coastwise trade, with a net tonnage of 167,594 tons and a cargo tonnage of 217,285 tons. The total cargo tonnage that traversed the canal during the fiscal year amounted to 3,140,046 tons.

Canal tolls.—The tolls collected during the fiscal year ended June 30, 1916, from vessels using the canal amounted to \$2,399,830.42.

In his annual report for the fiscal year ending June 30, 1916, Gen. Goethals, Governor of the Panama Canal, again calls attention to the confusion resulting from the application of the United States rules of measurement of vessels in addition to the Panama Canal rules of measurement, and invites attention to the necessity of adopting some one rule for levying tolls on vessels passing through the canal. He states that as time goes on and traffic increases, with a resulting increase in the number and classes of vessels using the canal, experience has shown beyond a doubt that the fairest rules for determining the tonnage of a vessel on a just basis are the Panama Canal rules of measurement; in short, on the earning capacity of the ship. Furthermore, the application of the United States rules for measurement has resulted in exempting practically all sheltered spaces and deck loads of vessels transiting the canal, which, in turn, has resulted in discrimination against most of the United States vessels utilizing the waterway, due to the fact that almost all of the United States vessels are so constructed that they are unable to take advantage of shelter-deck space. On the other hand, the United States rules provide for the exemption of certain cabin space above the upper deck that is not a deck attached to the hull, which would, in most cases, result in discrimination against foreign vessels and in favor of United States passenger steamers, if the national register of the vessel were recognized as a factor in the levying of tolls. Had the Panama Canal rules for measurement been in force, the revenue from this source would have been \$2,790,544.47, instead of \$2,399,830.42 as stated above, showing a direct loss of revenue on this account of \$390,714.05.

Our relations with Panama.—Gen. Goethals also again calls attention to the necessity of an agreement between the Governments of the United States and Panama for modifying the so-called Taft agreement, which is, in many respects, disadvantageous to both Governments, and should be substituted by an agreement made in accordance with our present mutual needs and with our rights under the treaty.

THE PANAMA RAILROAD.

The result of the company's business of every character for the fiscal year ending June 30, 1916, after meeting the cost of operation, together with fixed charges aggregating \$79,023.30 and charges for

depreciation on rolling stock, floating and plant equipment of \$461,244.48, shows—

Net income of.....	\$2, 453, 592. 84
As against.....	914, 860. 58
For the previous year, or an increase of.....	1, 538, 731. 76

During that period \$2,148,542.89 was applied to additions and betterments of plant and equipment.

The increase in revenue derived from the railroad from its local and through business as compared with the previous year amounts to \$704,709.37 and is due entirely to the closing of the canal to traffic for a large portion of the year, which resulted in the railroad's transporting 306,057 tons of freight in excess of prior period.

The steamship line contributed to the net revenue \$1,004,373.05—an increase over the previous fiscal year of \$504,519.63, due to an increase in rates and in tonnage carried.

At the end of this fiscal year the company had \$2,960,868.55 of available funds in the hands of designated depositories and, in addition, securities purchased at a cost of \$2,040,168.75 in a reserve fund established September 12, 1911.

WATERWAYS AND WATER POWER.

The War Department is constantly dealing with the important question of waterways and water power, not only under the river and harbor legislation passed from time to time and dealing with specified waterway improvements but also under the General Dam Act and other legislation dealing with the diversion of streams and the establishment of water powers. Congress is, of course, actively considering this latter subject, and the prospect is that comprehensive provision will be made for the conservation of the undeveloped water power of the United States, which is enormous in its possibilities and comprises the great unexpended natural resource of the Nation.

Several special problems in this connection are more or less constantly before the department. The first of these is the Chicago Drainage Canal. This canal was built under the authority of the State of Illinois for sanitary purposes, but has never had the approval of Congress. It was completed in 1899, and application was then made to the War Department for permission to connect the canal with the south branch of the Chicago River, thus reversing

the flow of that stream and diverting its waters from Lake Michigan into the drainage canal and thence into the Mississippi River. A conditional permit was granted in 1901, authorizing the diversion of 4,167 cubic feet seconds, and this amount has continued to be the legal limit. The drawing of water from the Chicago River into the canal affects the general navigation interests of the country on account of the tendency of such diversion to lower the level of the waters of the Great Lakes. From the beginning the operations of the Sanitary District have been looked upon with disfavor by navigation interests, and the Secretary of War has not only declined to increase the diversion temporarily authorized but has adhered to the decision that the permit granted was of a temporary character and that no permanent diversion of the waters of Lake Michigan could be made without express authority from Congress. Nevertheless the Sanitary District has for many years been withdrawing a much larger amount of water than is authorized by this permit. Upon two different occasions the Sanitary District has refused to conform to decisions of the Secretary of War declining to grant authority for larger diversions and has declared its intention to continue excess diversions unless prevented by injunction. Accordingly, in 1908 and again in 1910, bills in equity were filed at the instance of the War Department by the Attorney General seeking to enjoin excess diversion. The two suits were consolidated and tried in the United States District Court for the Northern District of Illinois, but remain undecided.

It seems quite clear that with the growth of population in Chicago the authorities of the Sanitary District contemplate still larger diversions than those already made, perhaps to the extent of 10,000 cubic feet seconds. This, it is estimated by the United States Lake Survey, would lower the waters of Lake Michigan and Lake Huron nearly 7 inches, Lake Erie about $5\frac{1}{2}$ inches, and Lake Ontario about $4\frac{1}{2}$ inches, mean lake levels, the reduction being much greater at low-water periods. The effect of such a lowering of lake levels would obviously be enormous losses to navigation interests and would necessitate large expenditures by the General Government for the restoration and reorganization of river and harbor improvements on the Great Lakes and their connecting waters, for which already appropriations aggregating more than \$90,000,000 have been made.

A related project to the Chicago Drainage Canal is the canal proposed to be constructed for commerce from Chicago through the Des Plaines River, and applications for permits have been made to the War Department to authorize this construction. The matter has also been considered in Congress, but no action taken. At present the authority of the State of Illinois to issue bonds for the construction of this canal is drawn in question before the local courts of the State, and a temporary injunction has been issued against the sale of the bonds. No action has therefore been considered by the War Department and none will be considered so long as these legal obstacles remain in the way. It would seem that this subject ought to have the attention of Congress, for while it is asserted in behalf of the project that there is no intention of making further withdrawals of water from the Great Lakes for the purposes of the canal than are already being withdrawn for the drainage canal, yet it seems quite clear that should this commercial waterway be established and constructed, and then a greater volume of water be needed for its operation than was originally estimated, the pressure to allow additional lake diversions would be very great; and if it be true in fact that such diversions are prejudicial to the navigation interests of the Great Lakes and the eastward-flowing waters, the relative advantages of the two uses of these waters ought to be weighted and finally determined by the legislative body.

Another question which has constantly been presented to the War Department for consideration is the withdrawal of additional water for power purposes at Niagara Falls. Congress has allowed the Burton Act to expire without renewal or substitution. There is therefore no express donation of power from Congress to the War Department to deal with this subject, and I have such grave doubt as to the power of the department under the General Dam Act, or any other general legislation, that I have hesitated to grant any of the permits so urgently requested. Under the international agreement between Canada and the United States a maximum of 20,000 cubic feet seconds is authorized to be diverted on the American side of the river. At present under permits granted either prior to or under the Burton Act about 15,000 cubic feet seconds are being so withdrawn. Plainly the subject is one which Congress ought to deal with, involving not only the most efficient use and just distribution of this great power but also affecting the preservation of the great

natural spectacle presented by Niagara Falls. The present position of the department on the subject is that it ought not to complicate the consideration of the whole subject by Congress, and that in the absence of further enabling legislation the present situation must be maintained.

FINANCIAL STATEMENTS.

Annexed hereto as Appendix B, Table 1, is a tabulated statement showing expenditures for the last fiscal year (1916), estimates and appropriations for the present fiscal year (1917), and the estimates for the next fiscal year (1918). This statement shows only expenditures from appropriations made by Congress in pursuance of estimates submitted by the War Department. It does not, therefore, include expenditures from appropriations made by Congress without estimates from the War Department, known as "Indefinite annual appropriations" and "Permanent annual appropriations." Expenditures from appropriations of these two classes are included in the statements annexed hereto as Tables 2, 3, 4, and 5, which are complete and detailed statements of the financial transactions of the department during the fiscal year ended June 30, 1916, covering every appropriation made for the service of the fiscal years 1916, 1915, 1914, and 1913, and prior years, showing all balances from appropriations, the amounts appropriated under each title of appropriation, the amounts drawn from the Treasury, and the unexpended balance of each appropriation remaining in the Treasury June 30, 1916, subject to requisition. These statements show also the amounts covered into the surplus fund of the Treasury from all appropriations under the control of the War Department which are no longer available or required for expenditure.

RETIREMENT OF GOVERNMENT EMPLOYEES.

An examination of the reports of my predecessors for a number of years shows that they have continuously recommended consideration of the subject of an equitable retirement law providing for the retirement of superannuated and disabled employees of the civil service. I am very happy to renew the recommendation. From time to time bills have been introduced into Congress providing for such retirement, but as yet none has been enacted into law. In the meantime, various industrial and transportation companies have found it to their interest to retire and pension superannuated employees. The

Federal Government is and should be a model employer. The provisions now made by the Government in the matter of compensation, hours of labor, vacations, sick leave, and holidays, are all wisely generous both as an example and as establishing a harmonious and helpful relation between employer and employee, which both conserves the spirit and health of the employee and secures for the employer that willingness and good will out of which service of maximum efficiency naturally arises. There seems to remain as the chief thing yet to be done this provision for retirement upon superannuation. The law ought not, in my judgment, to provide a mere service pension as has sometimes been done in municipal and State services in this country, under which employees who have served a stipulated number of years are authorized to retire irrespective of their ability still to render competent service. The law ought rather, upon a minimum service required, to authorize retirement either for disability arising in the course of the service or occasioned by the service itself, and this retirement should be in the hands of a competent authority which would determine the inability of the particular employee further to render adequate service in his place of employment. The effect of such a law would be to give an assurance of a competent and comfortable old age. It would relieve the employee from the fear of loss of occupation and of livelihood, would further inspire him to loyalty to the Government as an employer, thus improving the general quality of the service rendered by Government employees, although that is already high, and would permit the replacement of some employees in the various departments who have long and faithfully served the Government and reached venerable but enfeebled years without having had an opportunity to accumulate any competence upon which their retirement can rest.

ENUMERATION OF REPORTS SUBMITTED.

I submit herewith the report of the Chief of Staff and the report made to him by the Chief of Coast Artillery; the reports of the heads of bureaus of the War Department; and the reports of the commissioners of the four military parks, the Superintendent of the United States Military Academy, the governor of Porto Rico, and the Philippine Commission.

NEWTON D. BAKER,
Secretary of War.

APPENDIX A.

DECISION OF THE SECRETARY OF WAR ON THE EFFECT OF SECTION 5 OF THE NATIONAL DEFENSE ACT.

WAR DEPARTMENT,
Washington, September 13, 1916.

The provisions of section 5 of "An act for making further and more effectual provision for the national defense, and for other purposes," approved June 3, 1916, relating to the General Staff Corps, call for an opinion from the Secretary of War as to their effect upon the transaction of the business of the department and the relations to exist in the future between the Chief of the General Staff and the heads of various bureaus of the War Department.

Section 5 provides that the General Staff Corps shall consist of one Chief of Staff, detailed in time of peace from major generals of the line, and various other officers, for some of whom specific duties are provided, as, for instance, that one of them is required to be president of the Army War College. The General Staff Corps is made a detailed corps, with the result that upon being relieved from duty in that corps officers return to the branch of the Army in which they were permanently commissioned, and no officer detailed to the General Staff Corps is eligible to a further detail therein until he shall have served two years with the branch of the Army in which commissioned, except in time of actual or threatened hostilities. Thus the General Staff Corps is made to consist of a constantly changing detail of officers brought from the line of the Army and returned thereto, with the apparent purpose of having this corps represent and embody the opinion of the Army upon technical military subjects, as that opinion is matured and developed from time to time by actual experience, and careful provision is made against the General Staff Corps becoming a permanent body disassociated from the actual military forces of the Nation, and therefore, to a greater or less extent, out of touch with the opinion of the active Army.

So far as the duties assigned to the General Staff Corps by section 5 of the National Defense Act are concerned, they are covered by the following language:

All officers detailed in said corps shall be exclusively employed in the study of military problems, the preparation of plans for the national defense, and the utilization of the military forces in time of war, in investigating and re-

porting upon the efficiency and state of preparedness of such forces for service in peace or war, or on appropriate general-staff duties in connection with troops, including the National Guard, or as military attachés in foreign countries, or on other duties, not of an administrative nature, on which they can be lawfully and properly employed.

Certain redistribution of functions are made by the act, the most notable being the abolition of the Mobile Army Division and Coast Artillery Division, the latter of which is created into a bureau of the War Department, and the business of the former is committed to the office of The Adjutant General. But scattered through this section there are statements of this import:

That the War College shall remain fully subject to the supervising, coordinating, and informing powers conferred by law upon members of the General Staff Corps.

That the bureau of The Adjutant General shall, "subject to the exercise of the supervising, coordinating, and informing powers conferred upon members of the General Staff Corps by act of Congress last hereinbefore cited," perform the business theretofore performed by the Mobile Army Division, and that "the Chief of Coast Artillery shall be an additional member of the General Staff Corps and shall also be adviser to and informant of the Chief of Staff in respect to the business under his charge."

And then follows certain restrictive language which calls for this opinion. The language is as follows:

Provided further, That hereafter members of the General Staff Corps shall be confined strictly to the discharge of the duties of the general nature of those specified for them in this section and in the organic act of Congress last hereinbefore cited, and they shall not be permitted to assume or engage in work of an administrative nature that pertains to established bureaus or offices of the War Department, or that, being assumed or engaged in by members of the General Staff Corps, would involve impairment of the responsibility or initiative of such bureaus or offices, or would cause injurious or unnecessary duplication of or delay in the work thereof.

It will be observed that the section under review does not negative the survival of the "supervising, coordinating, and informing powers" conferred by law upon members of the General Staff Corps, but, on the contrary, reiterates those powers, and in the transfer of certain business in the War Department from divisions abolished by the act expressly subjects those powers in the hands of the new donees to the General Staff powers either enumerated in this section or incorporated into it by reference to the act approved February 14, 1903, which created the General Staff Corps, no part of which act is in express terms repealed. It seems clear, therefore, that the new part of this legislation, namely, that restricting the work to be done by members of the General Staff Corps to work of a nonadministrative nature is the only phase of it calling for interpretation, and it is

equally clear that this interpretation must proceed upon the foundation established by an understanding of the intention of Congress, as expressed in the act of February 14, 1903, which is not only the act by which the General Staff was established, but is plainly the act assumed by Congress as the fundamental and organic basis of whatever modifications are intended by section 5 of the act of June 3, 1916.

The development of a general scheme of systematic instruction in the Army, leading to the original War College Board, undoubtedly directed the attention of the Secretary of War to the general subject of Army organization. In the Report for 1901, Secretary Root said:

The creation of the War College Board and the duties which will be imposed upon it, as indicated in my report for 1899, is probably as near an approach to the establishment of a General Staff as is practicable under existing law. * * *

No one can doubt that the general and field officers of our Army have been too exclusively occupied in details of administration, with inadequate opportunity and provision for the study of great questions, and consideration and formation of plans, comprehensive forethought against future contingencies, and coordination of the various branches of the service with a view to harmonious action. A body of competent military experts should be charged with these matters of the highest importance, and to that end I strongly urge the establishment by law of a General Staff, of which the War College Board shall form a part.

In the Annual Report for 1902 Secretary Root returns to this subject and argues it at considerable length, showing continuous improvement in Army organization, but saying:

Our military system is, however, still exceedingly defective at the top. We have a personnel unsurpassed anywhere, * * * We have the different branches of the military service well organized, each within itself, for the performance of its duties. Our administrative staff and supply departments, as a rule, have at their heads good and competent men, faithful to their duties, each attending assiduously to the business of his department.

But when we come to the coordination and direction of all these means and agencies of warfare, so that all parts of the machine shall work true together, we are weak. Our system makes no adequate provision for the directing brain which every army must have, to work successfully. Common experience has shown that this can not be furnished by any single man without assistants, and that it requires a body of officers working together under the direction of a chief and entirely separate from and independent of the administrative staff of an army. * * * This body of officers, in distinction from the administrative staff, has come to be called a general staff.

The whole discussion of this subject by Secretary Root is informing, and in order to get an understanding of the full weight of the argument made all that is said on that subject in his report should be examined. The following sentences, however, are indicative of the thought in his mind:

Such a body of men doing general staff duty is just as necessary to prepare an army properly for war in time of peace as it is in time of war. It is not an executive body; it is not an administrative body; it acts only through the authority of others. It makes intelligent command possible by procuring and

arranging information and working out plans in detail, and it makes intelligent and effective execution of commands possible by keeping all the separate agents advised of the parts they are to play in the general scheme. * * *

The title of Chief of Staff, on the other hand, denotes a duty to advise, inform, and assist a superior officer who has command and to represent him, acting in his name and by his authority in carrying out his policies and securing the execution of his commands. The officer who accepts the position assumes the highest obligation to be perfectly loyal to his commander, to exclude all personal interest from his advice and representation, and to try, in the most whole-hearted way, to help him to right conclusions, and to successful execution of his policies, even though his conclusions may not agree with the advice given. For the successful performance of his duties the Chief of Staff must have the entire confidence of his commander. * * *

The Constitution requires the President to be the commander of the Army, and a great variety of laws require the Secretary of War, who directly represents the President, to supervise and direct the expenditure of the vast sums of money appropriated annually by Congress for the support of the Army. As every important movement requires the use of money, so long as the Secretary of War performs this duty faithfully he must practically control the operations of the Army in time of peace, and there can not be any independent command of the Army, except that which the President himself exercises over the Secretary of War and everybody else in the military establishment. It is because Congress has always looked to the civilian Secretary at the head of the War Department to hold the purse strings, that the laws require all the great departments which build the fortifications and furnish the arms, supplies, and munitions of war, and actually expend the money for those purposes, such as the Engineer, Ordnance, Quartermaster's, and Subsistence Departments, to act under the direction of the Secretary, and withhold from the officer who is called "Commanding General of the Army" all control over those departments.

Continuing the argument thus made Secretary Root shows that the office of Commanding General of the Army and the powers conferred upon that officer were entirely inconsistent with and inadequate for the duty contemplated for the Chief of Staff, which office he sought to have established. For the latter office he desired powers of coordination, supervision, and control, in the name of the Secretary of War and under the direction of the Secretary of War, wholly different from and greater than those previously intrusted to the Commanding General of the Army.

In his report for 1903, after the passage of the Act of February 14, 1903, Secretary Root says:

The important military event of the year affecting the Regular Army has been the reorganization of the system of military control under the general staff act approved February 14, 1903. * * * This act abolished the separate office of Commanding General of the Army, provided for a military Chief of Staff to the President, who, acting under the directions of the President, or of the Secretary of War representing him, should have supervision not only of all troops of the line but of the special staff and supply departments which had theretofore reported directly to the Secretary of War; and it created for the assistance of the Chief of Staff a corps of 44 officers, who were relieved from all other duties.

After describing the mode of organization of the first General Staff Corps, Secretary Root says:

The tenth article of the regulations relating to the Chief of Staff states explicitly the new theory of control inaugurated by the General Staff act.

That new theory he quotes from the regulations to be as follows:

10. Under the act of February 14, 1903, the command of the Army of the United States rests with the constitutional Commander in Chief, the President. The President will place parts of the Army, and separate armies whenever constituted, under commanders subordinate to his general command; and, in case of exigency seeming to him to require it, he may place the whole Army under a single commander subordinate to him; but in time of peace and under ordinary conditions the administration and control of the Army are effected without any second in command.

The President's command is exercised through the Secretary of War and the Chief of Staff. The Secretary of War is charged with carrying out the policies of the President in military affairs. He directly represents the President and is bound always to act in conformity to the President's instructions. Under the law and the decisions of the Supreme Court his acts are the President's acts, and his directions and orders are the President's directions and orders.

The Chief of Staff reports to the Secretary of War, acts as his military adviser, receives from him the directions and orders given in behalf of the President, and gives effect thereto in the manner hereinafter provided.

Secretary Root then says, with his customary clarity and decision of expression:

It will be perceived that we are here providing for civilian control over the military arm, but for civilian control to be exercised through a single military expert of high rank, who is provided with an adequate corps of professional assistants to aid him in the performance of his duties, and who is bound to use all his professional skill and knowledge in giving effect to the purposes and general directions of his civilian superior, or make way for another expert who will do so.

Commenting upon the effect of the inauguration of the system, Secretary Root says:

In some cases the intervention of the Chief of Staff and his assistants has resulted in an apparent diminution of the independent authority of other officers. This has been received almost universally with a cheerful readiness to subordinate personal considerations to the good of the service.

The act of February 14, 1903, is universally regarded as the most important piece of Army legislation adopted in recent years. It was recognized at the time as a thoroughgoing and radical change in the theory of Army control. Not unnaturally this act received very earnest consideration in Congress prior to its passage. The hearings on it were extensive, and Secretary Root, one of the foremost lawyers of the country, and one of the great Secretaries of War of modern times, in his appearance before committees illustrated and reiterated the purpose and meaning of the measure advocated by him. I have examined these hearings with some care, and I find that, with-

out exception, witnesses and members of both House and Senate understood the purpose of the act to be as gathered from the previous quotations from the annual reports of Mr. Root, as Secretary of War. Thus, in his hearing before the Senate Committee on Military Affairs, Secretary Root says:

You have imposed by law upon the Secretary of War the responsibility for the expenditure of great sums of money which you appropriate every year, and you have established a great number of corps, bureaus and departments which the Secretary is bound to supervise. Now, I have doubt whether it is competent for the Secretary of War to do that through the intermediation of a Chief of Staff or a General Staff unless there is some statutory authority. I do not know whether in the face of the statute which makes the Quartermaster General and the Commissary General and the Chief of Ordnance directly responsible to the Secretary of War I can order them to report to a Chief of Staff.

I do not want you to relieve the Secretary of War of responsibility, but I want you to enable him to discharge this responsibility through a military officer who will gather together in the performance of staff duties all the considerations affecting the decision that the Secretary has to make, and do it with military knowledge, instead of the Secretary having to dig around and gather them himself and collate the advice and requests that come from the heads of these different departments that are all overlapping and interwoven in their action.

In short, I think nothing can be clearer from the written opinions of the Secretary of War, whose suggestions are responsible for the creation of the General Staff, and from the hearings before the committees of Congress and the debates in the Congress upon the passage of the General Staff bill, than that it was intended to supply to the Secretary of War a lawfully authorized military adviser to whom all other heads of departments and bureaus should report, and through whom the Secretary of War should be constantly kept advised and informed; that it should be the duty of this officer, aided by the General Staff Corps created by the act, so to advise himself of all operations of the military departments and bureaus of the War Department as to inform the judgment of the Secretary upon any question submitted for his decision, and by correlating, coordinating, and supervising the judgments of the various heads of bureaus and subdepartments be able to prevent a civilian Secretary of War from inadvertent error, due either to a lack of familiarity with military matters or to the vast pressure of business of many and diverse characters which too far absorb the time of the Secretary of War to permit him, personally, to undertake the detailed study necessary in each case.

It was out of this atmosphere and with this intention that the act of February, 1903, was passed, and the language adopted to meet this situation seems most apt and adequate. I quote from the statute:

There is hereby established a General Staff Corps, to be composed of officers detailed from the Army at large under such rules as may be prescribed by the President.

SEC. 2. That the duties of the General Staff Corps shall be to prepare plans for the national defense and for the mobilization of the military forces in time of war; to investigate and report upon all questions affecting the efficiency of the Army and its state of preparation for military operations; to render professional aid and assistance to the Secretary of War and to general officers and other superior commanders, and to act as their agents in informing and coordinating the action of all the different officers who are subject under the terms of this act to the supervision of the Chief of Staff; and to perform such other military duties not otherwise assigned by law as may be from time to time prescribed by the President.

* * * * *

SEC. 4. That the Chief of Staff, under the direction of the President or of the Secretary of War, under the direction of the President, shall have supervision of all troops of the line and of The Adjutant General's, Inspector General's, Judge Advocate's, Quartermaster's, Subsistence, Medical, Pay, and Ordnance Departments, the Corps of Engineers, and the Signal Corps, and shall perform such other military duties not otherwise assigned by law as may be assigned to him by the President. Duties now prescribed by statute for the Commanding General of the Army as a member of the Board of Ordnance and Fortification and of the Board of Commissioners of the Soldiers' Home shall be performed by the Chief of Staff or other officer designated by the President.

If this act means anything, it means that in large and general terms the Chief of Staff thereby authorized has supervision of the corps, bureaus, and departments therein enumerated, and the large and generous terms employed indicate the plain intention of Congress to empower the Chief of Staff to stand in the relation of military aide and adviser to the Secretary of War, and, acting in his name, so to direct the activities of the heads of bureaus and sub-departments as to coordinate and harmonize their activities.

If the large and general purpose outlined in the foregoing paragraph has been changed by the language of section 5 of the National Defense Act, that change must result from these words:

All officers detailed in said corps shall be exclusively employed * * * on other duties, not of an administrative nature,

or from these words in the proviso:

and they shall not be permitted to assume or engage in work of an administrative nature that pertains to established bureaus or offices of the War Department, or that, being assumed or engaged in by members of the General Staff Corps, would involve impairment of the responsibility or initiative of such bureaus or offices or would cause injurious or unnecessary duplication of or delay in the work thereof.

The weighty part of this language apparently is the prohibition upon members of the General Staff from performing duties of an administrative nature, and we are called upon, therefore, to determine what was meant by the words "administrative duties" in this act.

At the outset it would seem obvious that no such glancing blow as this could have been intended as an implied repeal of the whole

fundamental theory of the reorganization act whereby the General Staff was created. It is fair to assume that Congress did not intend to inaugurate a race for power among bureau chiefs or to erect the bureaus of the War Department into a system of coordinated impediments to one another. It must not be forgotten that the Army is a whole—divided, for the purposes of administration, into many parts—but each action by any of the parts must be consistent with the healthy action of the whole. A realization of this was the moving cause to the creation of the General Staff; and if the Congress had come to believe that its effort to correct the evils sought to be redressed by the creation of the General Staff was a failure and that no such supervision and coordination as was then aimed at had resulted from the General Staff when created, and so believing had desired to abandon that experiment, it would not have been done by this tentative, obscure, and admonitory sentence. In other words, an evil of large proportions and menacing character had presented itself in 1903. Congress erected a new system to deal with that evil. If the system has failed and Congress is disillusioned with it as an experiment, the whole structure will be swept aside and some new corrective of the old evils attempted. But it is quite inconceivable that the Congress in any such frame of mind would merely paralyze without removing the corrective agency it had created and provide no substitute for it—restoring the old system with all of its evils and the added encumbrance of a paralyzed and inoperative machine originally designed as a corrective.

I have read the extremely able arguments which have been prepared for my consideration on this subject by the Judge Advocate General and others. To the extent that I am now disagreeing with the view therein expressed, it seems to me that my disagreement is rather one of assumptions than of logic. If it be assumed that a lot of promiscuous interferences, duplications, and losses of time had grown up in the operation of the General Staff system, then the language adopted by Congress would seem to be an admonition to the Secretary of War to correct those difficulties; and, to the Chief of the General Staff, recalling to his attention the primary purposes for which the General Staff was created, in order to prevent a practice growing up which would involve the operations of the General Staff in masses of detail, and so far absorb its mind as to leave no leisure for the consideration of general-policy questions, which are, of course, of great moment to be considered. It seems to me that the Judge Advocate General does assume that the Congress had in mind the existence of those duplications, interferences, and losses of time, and that therefore the Congress by the use of the word “administrative” must have intended to provide a rule which would exclude the General Staff practically from every other concern except the con-

sideration of large-policy questions. I admit that where an evil exists and a legislative enactment is addressed to it, the rule of interpretation seeks to expand the proposed remedy to accomplish the purpose for which it was designed. But the Congress had before it no catalogue of evils. No complaints were made to the Congress by the Secretary of War—who speaks with authority for the War Department—that he found himself unable to secure an adequate consideration of major policy problems from the General Staff because Congress had imposed conflicting duties upon the General Staff. Individual officers of the Army may have undertaken to express their opinions to Members of the Congress about the exercise of the coordinating functions of the General Staff. But all such opinions are necessarily partisan and partial, so that we must limit our assumption to the facts, and in so doing we find no system of facts adequate as a predicate for action by Congress which would destroy the power of the General Staff, bind the Secretary of War to rely upon the uncoordinated advice of individual bureau chiefs, and while giving the Chief of the General Staff the duty of coordinating the functions of the military bureaus of the department at the same time prohibit that degree of supervision over the affairs of those bureaus which in his judgment is necessary to equip him with qualifying information:

As a matter of fact, the word “administrative” is one of extremely doubtful import. Legally it perhaps means, when applied to duties, such duties as involve no exercise of discretion. That is to say, if an officer is directed by statute to pay a dollar a day to each of 10 persons, no discretion is involved in his payments—his duty is administrative. If such an officer is authorized to pay a dollar a day to so many of a group of 10 persons as shall have lived up to a certain standard of performance in duties assigned them day by day, then the discretion of determining the merit of applicants for the pay is non-administrative, because a discretionary duty. I doubt very much, however, whether this word was used in any such technical sense. The rule of construction in such cases is that unless there is something in the context to determine that a technical meaning is attached to a term, it will be assumed to be used in the plain, ordinary, and popular meaning of the word. Now, the plain, ordinary, and popular meaning of this term in this context obviously is that the Chief of the General Staff and the members of the General Staff Corps shall not administer the offices of the bureau chiefs. That is to say, that the Chief of the General Staff shall give no order to a subordinate of the Chief of Ordnance or The Adjutant General, for that would be the administration of that department, and such administration must proceed from the head of the department. Indeed, it seems to me entirely likely that the statute under examination provides its own definition of the meaning of the word “administrative,” for it

says, in effect, that these administrative duties are such as those which pertain—

to established bureaus or offices of the War Department, or that, being assumed or engaged in by members of the General Staff Corps, would involve impairment of the responsibility or initiative of such bureaus or offices, or would cause injurious or unnecessary duplication of or delay in the work thereof.

These words last quoted supply all the guide necessary for a working definition of the word "administrative," and they enumerate the kind of acts which the Congress does not intend the General Staff to undertake. They are exactly the kind of acts which the original act creating the General Staff did not intend to assign to the General Staff. Secretary Root said the proposed duties are not administrative, are not executive, but are correlating, informing, supervising. So that we in effect have in this latest legislative expression a reiteration of the intentions of the Congress in the earlier act as defined and explained by the authority of the act and the policy which it embodied.

It seems to me, therefore, entirely clear that the structure erected by the act of 1903 remains as then created, except for the explicit modifications provided in the act of 1916 and not affecting the current of this argument; that the Chief of the General Staff is charged with the supervision of the various departments, bureaus, and offices of the War Department for the purpose of coordinating their activities and for the purpose of so informing the judgment of the Secretary of War that he may not, by inadvertence or unfamiliarity with military practice, take action which would be prejudicial to harmonious results in the military service. Finding the intention of the act to be as here set forth, it is my opinion that the Chief of the General Staff is the primary adviser of the Secretary of War in all matters having to do with the Military Establishment; that in order properly to inform himself, the Chief of the General Staff must know of the proceedings in the various bureaus, departments, and offices; that, to as large an extent as possible, the action of these bureaus, departments, and offices should be regulated by large policies laid down by the Secretary of War, the carrying out of which would involve merely administrative activity; but that in order to make sure that these policies are not being departed from or ought not to be changed, in order properly to harmonize the relations of several bureaus, it is not only appropriate but necessary for the Chief of the General Staff to pursue, with as great detail as his judgment dictates, the execution of these policies through the several bureaus.

It is easy to imagine a case in which the chief of a bureau or an officer would feel that some policy provided by the Chief of Staff in an effort to coordinate the work of several bureaus unduly restrained his activities, and that such a bureau chief would

desire to argue personally for his point of view before the Secretary of War. In any such cases the Chief of Staff should secure a hearing for the bureau chief before the Secretary, and I have no doubt that any Chief of Staff or any Secretary of War would be very zealous to see that opinions earnestly entertained by officers were considered thoroughly, for, after all, we are all of us common servants with a common purpose in a common cause, and our zeal for particular branches of that service is merely a specialization of our zeal for the welfare and success of the larger whole which includes it. A recognition of this fact produced the spirit which Secretary Root referred to with so much pleasure immediately after the creation of the General Staff, in which slight irritations, due to the unaccustomed machinery, easily gave way and harmonious relations arose. This fine spirit for the public service is no less present now and will work as excellent results.

The policy of the War Department, therefore, will remain as heretofore; the Chief of Staff, speaking in the name of the Secretary of War, will coordinate and supervise the various bureaus, offices, and departments of the War Department; he will advise the Secretary of War; he will inform himself in as great detail as in his judgment seems necessary to qualify him adequately to advise the Secretary of War. Should any regulations or orders be necessary to place the determination herein made in proper form, the Chief of the General Staff will prepare them for my signature.

NEWTON D. BAKER.

JULY 24, 1916.

From: The Office of the Judge Advocate General.

To: The Chief of Staff.

Subject: The lawful duties of the General Staff Corps.

1. The question of the duties of this corps with reference to their relation to the duties of the several bureaus of the department doubtless presents perhaps less difficulty in its legal than in its practical solution. Practical delimitation of adjacent jurisdiction lying within a single field of executive authority, definition of the jurisdictional boundary between the functions of the General Staff upon the one hand and each of the several established administrative bureaus of the War Department upon the other, must, from the very nature of the subject, involve some doubt and difficulty. Fortunately, at the threshold the statute establishes a guiding rule, which,

though a rule of legal construction, is at the same time a practical guide for the government of superior authority, who should be mindful to apply it in every doubtful case. The recent statute establishing and defining for the second time the duties of the General Staff Corps is, like the antecedent and original act of 1903, organic in nature, and, in addition, is remedial and corrective in its purpose. It gives clearest evidence of the conviction of Congress that the General Staff has heretofore been employed not altogether on its own proper duties, but has been diverted from them, leaving them to some extent unperformed, and has invaded and interfered with the long-established jurisdiction of the several bureaus of the department, to the consequent impairment of such bureau administration and to the detriment of general military efficiency. The primary purpose of the legislation was clearly to correct what was deemed to be a departure from established organic functions, to reestablish such functions, and to prevent future encroachments. Being corrective primarily, the statute must be construed so as fully to effect its remedial purpose. In so far as the statute invests officers of the General Staff with powers and duties in an independent field of military activity, it should be liberally construed; but whenever their powers and duties lie close to, or become such as may impinge upon, or affect those of an established bureau, the opposite rule of interpretation must be the one to govern. The statute must be so construed, and it ought to be so executed.

2. The duties must be found in the meaning of the language of the statute measured by that rule. The recent statute (section 5, National-Defense Act) has to be read in comparison with section 2 of the original act of 1903 (32 Stat., 831). Both sections contain an enumeration of General Staff duties, and the later organic expression is connected with the former by a general reference to some of the general duties prescribed in the former act. The enumeration of duties in the recent act is impressively qualified by limitations and prohibitions contained in the same section, which serve to give an accuracy of definition to the enumeration which the old act never had. Said section 5 provides that—

All officers detailed in said corps shall be exclusively employed [serialization mine]—

(a) In the study of military problems.

(b) The preparation of plans for the national defense and the utilization of military forces in time of war.

(c) In investigating and reporting upon the efficiency and state of preparedness of such forces for service in peace or war.

(d) Or on appropriate General Staff duties in connection with troops, including the National Guard.

(e) Or as military attachés in foreign countries.

(f) Or on other duties, not of an administrative nature, on which they can be lawfully and properly employed.

All the above classes of duties are described with sufficient definiteness except the concluding one. What are the other duties "on which they can be lawfully and properly employed"? Omitting for the moment all consideration of the limitations upon the quality and character of the duties thus enumerated, these other unspecified duties are to be found by reference to the enumeration of duties in section 2 of the original act. The duties enumerated in said section 2 and not brought forward and specifically enumerated in the recent section 5 and to which therefore the general provision of the later section makes reference, will be found to be these:

(ff) To render professional aid and assistance to the Secretary of War and to general officers and other superior commanders, and to act as their agents in informing and coordinating the action of all the different officers who are subject under the terms of this act to the supervision of the Chief of Staff;

(fff) And to perform such other military duties not otherwise assigned by law as may be from time to time prescribed by the President.

This enumeration, then, completed by expressing what section 5 adopts by relation out of the original act, is a full enumeration of General Staff duties except as to a few detached instances not affecting this question and therefore not here considered. But the duties thus enumerated are substantially modified and qualified by the express limitation and prohibition found in the section prescribing the General Staff duties. Those qualifications are to the effect—

(1) That General Staff duties must not be of an administrative character.

(2) Specifically, they must not consist of work of an administrative nature pertaining to established bureaus or offices of the department.

(3) They must be general in character.

(4) If they are not specifically enumerated, they must be of the same general nature of those that are enumerated.

(5) They must be such as are not assigned by law, custom, or regulation to other bureaus and officers.

(6) They must not be such as would, if performed by the General Staff, involve impairment of responsibility or initiative of such bureaus or offices or cause injurious or unnecessary duplication or delay in the work itself.

Restating, then, the duties of the General Staff, for the purpose of clarity, they may be said to consist specifically—

(1) In the study of military problems.

(2) In the preparation of plans for the national defense and the utilization of the military forces in time of war.

(3) In the investigating and reporting upon the efficiency and state of preparedness of such forces for service in peace or war.

(4) Appropriate General Staff duties in connection with troops, including the National Guard.

(5) Duty as military attaché in foreign countries.

The duties thus far specifically enumerated seem to me to be essentially such as lie beyond the domain of bureau administration, and, therefore, as to them, there would seem to be little field of application of the qualifications mentioned. If, however, those executing this act should have a different view, they will be restrained in the assignment and performance of those duties by these same limitation; and if these specific duties can be conceived to come into contact with bureau administration, then the qualifications will mark the delimiting line.

Proceeding now, by continuing the enumeration, to those duties which by nature are such that, if not restrained by the limitations, might in the future, as they have done in the past, encroach upon and invade the field of bureau administration, they are seen to be—

(6) Rendering professional aid and assistance to the Secretary of War and to general officers and other superior commanders and to act as their agents in supervising, coordinating, and informing the action of the different officers who are subject under the terms of this act to the supervision of the Chief of Staff.

(7) And to perform such other military duties not otherwise assigned by law as may be from time to time prescribed by the President.

Applying to these last two general classes the qualifications just mentioned, the rule is deduced that the General Staff may not render professional aid and assistance to the Secretary of War, to general officers, and other superior commanders, nor act as their agents in supervising, coordinating, and informing the action of the different bureaus, nor perform any other duty by special assignment unless these duties be of a nonadministrative character, not pertaining to any established bureau or office of the War Department, general in their nature, of the same general kind as those duties which have been specifically enumerated, and such as if performed by the General Staff would not involve any impairment of the initiative or responsibility of bureaus.

3. The meaning of these limitations and qualifications is not difficult to determine. The General Staff must not perform administrative duties. The term "administrative" is not one always having a fixed significance, but its meaning when used with reference to War Department affairs is one which those conversant with such affairs well understand. Those duties which by law, regulation, and established custom are, or heretofore were, habitually performed in the several bureaus or offices of the department, commonly known as administrative bureaus or offices, or at the various subordinate headquarters in the same administrative field under the general direction and supervision of, and with accountability to, the head of the bureau,

are duties of an administrative nature to which the statute refers, administrative duties as distinguished from those which are essentially and more intimately connected with military power of command. It may be remembered in passing that in addition to what is commonly understood by the term "administrative duties" the several administrative bureaus may have duties conferred upon them by statute which by reason thereof pertain to said bureau, and these duties may not be performed or interfered with by the General Staff by virtue of the express provision of the statute to that effect. Of course, the General Staff Corps is in a very real sense a superior bureau of the War Department. It has duties of the utmost importance prescribed for it by statute. The performance of those duties will render necessary considerable intrabureau administration. Such administrative duties are a necessary incident of the exercise of their own power. But beyond such administrative duties I perceive none that that corps can perform.

Duties performed by the General Staff of whatever nature must be general in character. So the statute expressly provides. If the matter be of special rather than of general interest and concern; if it be limited rather than general in its effect; if it be a matter falling within and confined to the special jurisdiction of a bureau and not reaching directly other bureaus or the Army as a whole; if it be routine rather than of far-reaching consequence and importance; if it deal with details and specifics rather than generalities, with particular performance rather than general policy, then it is entirely clear that it is not a subject for General Staff consideration and functions.

All duties performed by special assignment or otherwise must be of the same general nature as those that are specifically enumerated. New jurisdictions and new activities may not be created for General Staff functions except in the field of general duties of the same nature as those by the statute specified, not of an administrative character, not pertaining to established bureaus or offices, not descending into detail, and not such as by their nature could be beneficially or more expeditiously performed by established bureaus or offices.

Unmistakably, whether wisely or not, Congress has sought to preserve untouched the special jurisdiction of each of the several bureaus of the War Department. It has spared no pains in limiting the powers and duties of the General Staff to matters of policy, of general concern, not falling within or directly affecting bureau jurisdiction. This it does by a reiteration which could be justified only by the apprehension that with less insistence the purpose of Congress would not be heeded, and that purpose is sealed with a drastic penalty. If, however, notwithstanding the effort of Congress to delimit clearly the boundaries of adjacent jurisdiction, there should

be by reason of the nature of the subject zones of uncertainty in which the dividing line is obscure—a twilight zone in which, unaided, it could not be clearly said whether the duties fall upon one side or the other—then in such cases, as heretofore said, the statute establishes for us a guiding rule, which is in effect that in case of doubt the presumption is conclusive against General Staff jurisdiction.

4. It may be well to look on the affirmative side of those General Staff duties lying adjacent to bureau administration. The General Staff relation of rendering professional aid to the Secretary of War and superior military commanders, and of acting as their agents in supervising, coordinating, and informing the action of the different officers subject to the supervision of the General Staff, becomes limited, if not by the original act certainly by the express requirement of the recent statute, to matters of a nonadministrative character, not pertaining to a particular bureau, and involving only general policies. Such a relation or capacity does not confer the right to command or to administer an established bureau or office, or to control its details or its methods of administration. The power may be only generally exercised.

It is pertinent at this point to note the opinion of the committee of the War College Division, as expressed in an accompanying memorandum, as follows:

It is the opinion of the committee that the organic act giving to the General Staff "supervising, coordinating, and informing powers," vests in the Chief of Staff the responsibility, power, and authority to prescribe and dictate the policy that will govern all bureaus of the War Department in their methods of administration.

The General Staff passes upon such questions of policy as are referred to it by proper authority for investigation, report, and recommendation.

The recommendation, when approved by the Chief of Staff and the Secretary of War, becomes settled policy which then governs all bureaus concerned.

This War College opinion will not stand analysis when tested by the law. By statute General Staff officers, including the chief, are made special staff agents in informing, supervising, and coordinating the action of the different bureaus, within the limitations flowing from the original act and especially within those expressed in the recent corrective legislation. This General Staff power is nevertheless but a staff power of duty, and, like all staff duty, has no inherent strength of its own. Neither can it gather aught by representation of superior authority that can enlarge its functions beyond the limitations of the statute, but must remain confined in scope and character by the express limitations of the recent act. The General Staff is not and can not be a source of military command. Its duties do not involve the power of command, but they rather establish a connection between commander and commanded, a power conduit leading from and to the source. To inform, to supervise, to coordi-

nate, is not to command, not to "dictate." To hold otherwise would deprive commanders of their inherent functions. Because of the generality of its position, the General Staff is generally informed of the operations that may be of general effect occurring within the special and limited spheres of bureau action; from its general vantage point it oversees all such operations, and, observing any lack of harmony in the general action of such limited authority which may affect general military efficiency, may devise means of coordination, and, in their capacity as professional advisors to military superiors, may address the power of command and the discretion of superior authority to secure such coordination. Neither the General Staff nor any officer thereof, including its chief, can lawfully exercise the power to dictate.

Neither can General Staff power be used to govern all bureaus of the War Department in their methods of administration. The power is concerned not with intradepartmental methods, but rather with action, the result of activity—results, and what is more, results of a general effect. General policy confined within its proper purpose can not be concerned with mere administrative methods; and to adopt the view announced by the War College Division would be to permit the General Staff to control bureau administration of every character, to depart from and neglect their own general functions, and thus nullify the law and postpone the reform which Congress intended to inaugurate. It is the effect of the language, and must therefore have been the real purpose of the act, to reestablish the relation of the several bureau chiefs as special aids and advisors to the Secretary of War upon matters which fall within their special jurisdiction, uninterfered with by an outside agency. As a matter of organic law established or recognized by Congress, such from the beginning of the Government has been the special purpose and function of the administrative bureaus. I am well aware that bureau chiefs have in times past gone beyond these limited functions, and equally aware that in the old days of the commanding general and in the later days of the General Staff control chiefs of bureau have had their jurisdiction unlawfully restricted and partially absorbed by agencies having no warrant of law for their action. Whether the establishment of such special bureau control is necessary or wise is immaterial, if it can be said upon a fair consideration of the statute that it is the organic system which Congress has prescribed and which it has so recently sought to preserve; but both candor and intellectual integrity require me to say that I can see nothing helpful to be achieved by subjecting the action of a bureau chief within the sphere of his special jurisdiction to the review of another officer of the Army whose position alone upon the General Staff is that which serves to endow him with a special knowledge

of the subject which Congress has exclusively intrusted to a bureau chief, and success can hardly be expected from such incongruity. The original statute, as well as the recent one, contemplated, of course, what ordinary intelligence must appreciate, that the administrative efforts of the several bureaus must be coordinated, and must be supervised for that purpose. Such a coordination lies of necessity beyond the power and jurisdiction of any particular bureau, and must therefore be regulated by agencies outside of those bureaus. But that regulation must be achieved without absorbing any of the bureau duties, and it must be of a general kind, and have regard to matters involving policies. The coordinating, supervising, and informing powers conferred upon the General Staff must be exercised with this principle in view.

5. Coming now to the duties of the Chief of Staff: I do not believe that by virtue of any authority he has, either in his capacity as a member of the General Staff Corps or as chief of said corps, he can lawfully exercise his power so as to stand between a bureau head and the Secretary of War himself upon matters assigned by law, regulation, and custom to the administrative bureau except by laying down general rules of policy and general rules designed to coordinate the efforts of the various bureaus; nor is he ever justified in substituting in such matters his judgment for theirs. I know that the practice under the law as it existed up to the passage of the National Defense Act did not accord with this view. Whatever may have been said in justification of that practice heretofore, in view of the unmistakable purpose of Congress to reestablish bureau jurisdiction absorbed by the General Staff and the Chief of Staff, as is so clearly enunciated in the recent act, the practice ought not to be continued. The Chief of Staff is but a member of the General Staff Corps, whose duties are the duties of that corps, except in so far as they may be found to be otherwise by section 4 of the original act, read in the light of the recent act, which establishes for him a special relation to the President and to the Secretary of War. That section is as follows:

That the Chief of Staff, under the direction of the President, or of the Secretary of War, under the direction of the President, shall have supervision of all troops of the line and of the Adjutant General's, Inspector General's, Judge Advocate's, Quartermaster's, Subsistence, Medical, Pay and Ordnance Departments, Corps of Engineers, and the Signal Corps, and shall perform such other military duties not otherwise assigned by law as may be assigned to him by the President. * * *

He is here given supervision of the line and of the staff departments. Supervision is a word of broad meaning. It may mean a direct control or it may mean a general power of overseeing, with a view to regulation through a power drawn from some other source. Supervision does not, as a legal concept, when applied to matters military, carry the idea of command. The abolition of the old office of com-

manding general was to bring departmental organization more in harmony with the constitutional precept that the Secretary of War, as the constitutional mouthpiece of the President, was himself the commander of the Army. Operating upon the same subject and for the same purpose as does the supervisory powers of that corps, the supervision specially conferred upon the Chief of Staff must be the kind of supervision which is conferred upon other members of the General Staff, who are in a sense the assistants of the Chief of Staff in the performance of his duties, though, of course, his supervisory power is of a much higher degree.

The supervisory power of the Chief of Staff to be exercised under the direction of the Secretary of War is of a general kind, does not extend to the invasion or absorption of duties of a special bureau, but is to be exercised upon general subjects in a general manner, seeking a general effect, with a general policy in view. It does not relate to particular and routine performance, it does not descend to an overseeing of minor or detailed operations. It concerns only the higher functions of command and administration and must relate to general results rather than to particular means and particular activities. I see nothing in the statute which substitutes the Chief of Staff for the several bureau chiefs as an aid and advisor to the Secretary of War concerning those matters which are committed by Congress to their special jurisdiction and control. But, on the other hand, the statute expressly provides to the contrary. Indeed, the organic act, notwithstanding the practice which grew up under it, in the very section devoted to the duties of the Chief of Staff indicates clearly that it was never the intention to confer upon him powers and duties already assigned to the administrative bureaus, for, as one of several reasons, in a general clause following an enumeration, it is prescribed that the Chief of Staff shall "perform such other military duties *not otherwise assigned by law* as may be assigned to him by the President." And the recent National Defense Act represcribes with emphasis and particularity the same relation and enjoins that hereafter it shall be observed.

I think the true view is this, that under the statute the jurisdiction of the Chief of Staff does not absorb that of the several bureaus nor subject their action or their views upon particular matters falling within their special jurisdiction to his review and modifying judgment, but that his function is limited to that of general supervision, going no farther than to secure by the exercise of general power under the direction of the Secretary of War harmonious cooperation and successful general results. Likewise it is only in respect of such matters and for such purposes that he is the special superior adviser of the Secretary of War.

I am well aware that those matters which are within the exclusive jurisdiction of the bureau chiefs must usually, in their finality, require executive action, and that it would be absurd to hold that the Secretary of War or the Assistant Secretary must personally dictate or prescribe that action in the myriad of matters. To my mind, this gives rise to no difficulty. Certainly it ought not to be urged to enlarge the duties of the Chief of Staff by requiring him, unlawfully, I think, to act ministerially and without discretion in numerous matters to the neglect of his own higher functions. If the matters are minor matters of routine or if they are minor matters subject to government by an established general policy which has already been established for their government, it would be unwise administration to require the discretion of the Secretary of War to be addressed in the execution of such details, and in such matters only his order evidenced ministerially by the signature of The Adjutant General or other appropriate bureau chief is needed to give formal authenticity to his action. If the subject be of more than routine importance and yet not of general effect nor involving general policy, such an exceptional case is to be considered by the head of the department upon the advice of the bureau chief. In all matters falling within the special jurisdiction of the several bureaus, Congress has said in effect that the views of the particular bureau chiefs shall govern the Secretary so far as his own judgment is to be advised; and if the Secretary of War respects not the advice of his lawful advisers but subjects it to extra-legal review, he to that extent dispenses with the statute and the lawful medium of control, and moreover destroys the distribution of departmental organic powers ordained by law.

E. H. CROWDER,
Judge Advocate General.

APPENDIX B (Tables 1 to 5).

TABLE 1.

EXPENDITURES, APPROPRIATIONS, AND ESTIMATES.

Expenditures for the last fiscal year (1916), the estimates and appropriations for the present fiscal year (1917), and the estimates for the next fiscal year (1918).

General object.	Expenditures for the fiscal year ended June 30, 1916.	Estimates for the fiscal year ending June 30, 1917.	Appropriations for the fiscal year ending June 30, 1917.	Estimates for the fiscal year ending June 30, 1918.
CIVIL ESTABLISHMENT.				
WAR DEPARTMENT PROPER.				
Salaries.....	\$1,734,131.14	\$2,076,670.00	\$1,974,043.33	\$2,163,490.00
Contingent expenses, War Department.....	44,326.98	59,700.00	45,000.00	57,000.00
Stationery, War Department.....	20,866.33	32,000.00	20,000.00	35,000.00
Postage to postal-union countries, War Department.....	150.00	250.00	250.00	250.00
Rent of buildings, War Department.....	9,700.00	39,700.00	24,700.00	12,700.00
Salaries and contingent expenses under superintendent public buildings and grounds.....	82,621.72	94,665.00	90,898.00	97,173.00
Total, War Department proper.....	1,891,796.17	2,302,985.00	2,154,891.33	2,365,613.00
CIVIC PUBLIC WORKS AND MISCELLANEOUS (EXCLUSIVE OF RIVERS AND HARBORS).				
MILITARY PARKS, ETC.				
Secretary's office:				
Chickamauga and Chattanooga National Park.....	54,092.76	55,260.00	55,260.00	55,260.00
Shiloh National Military Park.....	25,874.83	42,189.00	25,800.00	38,834.00
Gettysburg National Park.....	39,113.66	42,500.00	42,500.00	42,500.00
Vicksburg National Military Park.....	41,523.24	33,000.00	33,000.00	33,000.00
National Memorial Celebration and Peace Jubilee, Vicksburg, Miss.....			150,000.00	
Engineer Department:				
Improvement of Yellowstone National Park.....	194,347.67	292,200.00	197,200.00	191,250.00
Improvement of Crater Lake National Park.....	44,916.00	100,000.00	50,000.00	75,000.00
Total.....	399,868.16	565,149.00	553,760.00	435,844.00
Less repayment of funds heretofore re- ported as expended.....	193.28			
Total, military parks, etc.....	399,674.88	565,149.00	553,760.00	435,844.00
BUILDINGS AND GROUNDS IN AND AROUND WASHINGTON.				
Engineer Department:				
Improvement and care of public grounds, District of Columbia.....	216,093.43	421,050.00	279,550.00	440,550.00
Improvement and care of public grounds.....	14,374.53	19,400.00	14,400.00	19,400.00
Repairs, fuel, etc., Executive Mansion..	52,942.45	57,000.00	53,000.00	117,000.00
Lighting, etc., Executive Mansion, etc..	6,509.67	8,600.00	8,600.00	8,600.00
Lighting public grounds, District of Columbia.....	22,218.10	26,120.00	26,120.00	26,120.00
Telegraph to connect the Capitol with the departments and Government Printing Office.....	499.87	500.00	500.00	500.00
Care and maintenance of Washington Monument.....	13,352.21	13,820.00	13,820.00	13,820.00
Repairs to building where Abraham Lincoln died.....	189.13	200.00	200.00	200.00
Improvements, birthplace of Washing- ton, Wakefield, Va.....		100.00	100.00	100.00
Erection of monuments, etc.....	45,475.00			
Total, buildings and grounds in and around Washington.....	371,654.39	546,790.00	396,290.00	626,290.00

Expenditures for the last fiscal year (1916), the estimates and appropriations for the present fiscal year (1917), and the estimates for the next fiscal year (1918)—Continued.

General object.	Expenditures for the fiscal year ended June 30, 1916.	Estimates for the fiscal year ending June 30, 1917.	Appropriations for the fiscal year ending June 30, 1917.	Estimates for the fiscal year ending June 30, 1918.
CIVIC PUBLIC WORKS AND MISCELLANEOUS (EXCLUSIVE OF RIVERS AND HARBORS)— Continued.				
NATIONAL CEMETERIES.				
Quartermaster Corps:				
National cemeteries.....	\$120,551.19	\$120,000.00	\$120,000.00	\$150,000.00
Pay of superintendents of national cemeteries.....	62,401.17	63,120.00	63,120.00	63,120.00
Headstones for graves of soldiers.....	42,758.54	50,000.00	50,000.00	50,000.00
Repairing roads to national cemeteries.....	11,275.06	12,000.00	12,000.00	12,000.00
Burial of indigent soldiers.....	1,820.65	2,000.00	2,000.00	2,000.00
Antietam battle field preservation.....	4,371.91	4,500.00	4,500.00	4,500.00
Disposition of remains of officers, soldiers, and civil employees.....	45,827.70	307,500.00	107,500.00	67,500.00
Confederate mound, Oakwood Cemetery, Chicago, Ill.....	250.00	500.00	500.00	500.00
Burial of indigent patients, Army and Navy Hospital, Hot Springs, Ark.....		200.00	200.00	200.00
Monuments or tablets in Cuba and China.....	699.46	1,000.00	1,000.00	1,000.00
Marking graves of Confederate soldiers and sailors who died in northern prisons.....	7,006.39			
Care, etc., of Confederate burial plats..	645.38	1,250.00	1,250.00	1,250.00
Confederate Stockade Cemetery, Johnston's Island, Sandusky Bay, Ohio...	250.00	250.00	250.00	250.00
Burial sites, Green Lawn Cemetery, Columbus, Ohio.....		1,979.60		
Reinterment of remains of Orman K. Osborne in National Cemetery, San Francisco, Cal.....			200.00	
Lodge, national cemetery, Salisbury, N. C.....			1,500.00	
Total national cemeteries.....	297,857.45	564,299.60	364,020.00	352,320.00
MISCELLANEOUS.				
Adjutant General's Department:				
Collecting military records of Revolutionary War.....	5.46			
Quartermaster Corps:				
Arrears of pay, bounty, etc. (certified claims).....	25,907.15	50,000.00	50,000.00	25,000.00
Pay, etc., of the Army, War with Spain (certified claims).....	3,806.75	2,000.00	2,000.00	1,000.00
Building Government exhibit, Panama-Pacific International Exposition, San Francisco, Cal.....	2,065.88			
Transporting and caring for interned Mexican soldiers and military refugees	82,113.21			
Transportation for refugee American citizens from Mexico.....	450.85			
Medical Department:				
Artificial limbs.....	74,976.93	65,000.00	65,000.00	210,000.00
Appliances for disabled soldiers.....	879.15	1,000.00	1,000.00	1,000.00
Trusses for disabled soldiers.....	1,391.33	2,500.00	2,500.00	2,000.00
Engineer Department:				
Survey of northern and northwestern lakes.....	122,233.61	150,000.00	125,000.00	150,000.00
Expenses, California Débris Commission.....	14,987.05	15,000.00	15,000.00	18,000.00
Prevention of deposits, harbor of New York.....	84,418.85	167,760.00	160,260.00	109,000.00
Raising of U. S. S. Maine, harbor of Habana, Cuba.....	1,558.33			
Permanent International Commission of Congresses of Navigation.....	1,791.30			
Bridge across Potomac River at Georgetown, D. C.....	1,000.00		250,000.00	500,000.00
Maintenance and repairs of Aqueduct Bridge, D. C.....			25,000.00	
Bridge across Republican River, Fort Riley, Kans.....			30,000.00	

Expenditures for the last fiscal year (1916), the estimates and appropriations for the present fiscal year (1917), and the estimates for the next fiscal year (1918)—Continued.

General object.	Expenditures for the fiscal year ended June 30, 1916.	Estimates for the fiscal year ending June 30, 1917.	Appropriations for the fiscal year ending June 30, 1917.	Estimates for the fiscal year ending June 30, 1918.
CIVIC PUBLIC WORKS AND MISCELLANEOUS (EXCLUSIVE OF RIVERS AND HARBORS)—Continued.				
MISCELLANEOUS—continued.				
Engineer Department—Continued.				
Meeting of Permanent International Association of Navigation Congresses in United States.....	\$154.87	.....	.....	.....
Board of Managers, National Home for Disabled Volunteer Soldiers:				
National Home for Disabled Volunteer Soldiers.....	4,295,342.81	\$3,901,900.00	\$3,820,900.00	\$3,905,900.00
State or Territorial homes for disabled soldiers and sailors.....	1,100,000.00	1,125,000.00	1,125,000.00	1,070,000.00
Miscellaneous relief acts, etc.....	1,067,749.89	.....	548,940.28	.....
Total.....	6,880,763.42	5,480,160.00	6,220,600.28	5,991,960.00
Less repayment of funds heretofore reported as expended.....	3.85	.....	.....	.....
Total miscellaneous.....	6,880,759.57	5,480,160.00	6,220,600.28	5,991,960.00
Total Civil Establishment.....	9,841,742.46	9,459,383.60	9,689,561.61	9,772,027.00
MILITARY ESTABLISHMENT.				
SUPPORT OF THE ARMY.				
Secretary's office:				
Contingencies of the Army.....	16,471.87	25,000.00	50,000.00	50,000.00
Construction and maintenance of military and post roads, bridges, and trails, Alaska.....	165,000.00	650,000.00	500,000.00	600,000.00
Office of the Chief of Staff:				
Army War College.....	8,776.91	9,000.00	9,000.00	9,000.00
Contingencies, military information section, General Staff Corps.....	14,838.81	11,000.00	11,000.00	11,000.00
Expenses of military observers abroad..	10,046.66	15,000.00	15,000.00	15,000.00
United States service schools.....	35,348.23	35,350.00	35,350.00	35,350.00
Relief of Matthew E. Hanna, late captain, Tenth Cavalry, U. S. Army.....	.....	.....	.....	532.18
Relief of Maj. Powell C. Fauntleroy, Medical Corps, U. S. Army.....	.....	.....	.....	601.40
Relief of Lieut. Col. Geo. O. Squire, Signal Corps, U. S. Army.....	.....	.....	.....	41.46
Relief of Lieut. Sherman Miles, Field Artillery, U. S. Army.....	.....	.....	.....	57.95
The Adjutant General's Department:				
Contingencies, headquarters of military departments.....	4,855.41	7,500.00	7,500.00	7,500.00
Chief of Coast Artillery:				
Coast Artillery School, Fort Monroe, Va.	28,707.72	28,000.00	28,000.00	28,000.00
Chief Signal Officer:				
Signal Service of the Army.....	1,041,213.19	4,641,624.06	14,281,766.00	16,600,000.00
Washington-Alaska military cable and telegraph system.....	82,518.48	50,000.00	50,000.00	50,000.00
Annunciator buzzer systems at target ranges.....	149.89	.....	.....	.....
Signaling equipment for coast-defense posts.....	1,979.84	.....	.....	.....
Commercial telephone service at Coast Artillery posts.....	7,104.13	8,500.00	8,500.00	10,000.00
Expenses, commission on selection of site for aviation school.....	974.10	.....	.....	.....
Quartermaster Corps:				
Pay, etc., of the Army.....	52,236,837.73	103,425,067.35	87,345,673.00	97,794,995.66
Extra-duty pay to enlisted men as clerks, etc., at Army division and department headquarters.....	4,629.17	.....	.....	.....
Collecting, drilling, and organizing volunteers.....	6.29	.....	.....	.....
Supplies, services, and transportation, Quartermaster Corps.....	43,918,376.01	.....	.....	.....
Subsistence of the Army.....	.....	27,526,827.03	20,000,000.00	19,293,394.00
Regular supplies.....	.....	13,196,422.09	11,000,000.00	13,453,995.19
Incidental expenses.....	.....	2,846,385.37	2,000,000.00	2,199,419.96

Expenditures for the last fiscal year (1916), the estimates and appropriations for the present fiscal year (1917), and the estimates for the next fiscal year (1918)—Continued.

General object.	Expenditures for the fiscal year ended June 30, 1916.	Estimates for the fiscal year ending June 30, 1917.	Appropriations for the fiscal year ending June 30, 1917.	Estimates for the fiscal year ending June 30, 1918.
MILITARY ESTABLISHMENT—Continued.				
SUPPORT OF THE ARMY—continued.				
Quartermaster Corps—Continued.				
Supplies, etc.—Continued.				
Transportation of the Army and its supplies.....		\$32,149,921.85	\$23,000,000.00	\$16,373,780.00
Water and sewers at military posts.....		2,607,987.05	4,000,000.00	3,027,964.00
Clothing and camp and garrison equipage.....		24,406,740.20	20,280,000.00	17,393,233.00
Horses for Cavalry, Artillery, En- gineers, etc.....	\$2,014,929.93	1,636,465.00	2,500,000.00	433,400.00
Barracks and quarters.....	1,987,030.61	3,985,872.76	3,146,000.00	7,416,767.57
Military post exchanges.....	74,423.61	40,000.00	48,592.00	75,445.00
Roads, walks, wharves, and drainage..	550,473.64	1,146,000.00	860,534.00	748,331.75
Barracks and quarters, Philippine Islands.....	406,170.06	513,981.00	790,000.00	730,000.00
Construction and repair of hospitals....	390,629.62	490,000.00	409,963.00	1,250,767.00
Quarters for hospital stewards.....	11,966.01	13,750.00	14,043.00	70,560.00
Shooting galleries and ranges.....	41,140.58	87,620.00	49,000.00	45,000.00
Maintenance, Army War College.....	10,060.11	10,700.00	10,700.00	10,700.00
Officers' quarters, remount depot, Front Royal, Va.....	3,444.10			
Claims for damages to and loss of private property.....	545.50	5,000.00	5,000.00	5,000.00
Army storehouses, Corregidor Island, P. I.....	86.65			
Rent of buildings, Quartermaster Corps.	31,700.96	42,749.10	42,039.10	42,225.10
Supply depots, Fort Sam Houston, Tex.			750,000.00	
Repairs to buildings, etc., at Gulf ports.			50,000.00	
Target range, Vancouver Barracks, Wash.....		100,000.00	100,000.00	
Target range, Fort Bliss, N. Mex.....			35,120.00	
Purchase of land, Coronado Heights, Cal.....		300,000.00		
Sites for aviation school, Signal Corps, Cal.....			300,000.00	
Land for aviation purposes, Army.....			300,000.00	
Transportation of rifle teams to national matches.....			60,000.00	
Vocational training.....				200,000.00
Council of National Defense.....			200,000.00	200,000.00
Filing equipment for the Army.....				45,000.00
Relief of Lieut. H. E. Miner.....		160.00		
Relief of Maj. H. E. Ely.....		200.00		
Relief of Lieut. Sloan Doak.....		150.00		
Relief of Lieut. J. A. Barry.....		135.00		
Relief of Lieut. Waldo C. Potter.....		375.00		
Relief of St. Francis Hospital, Newport News, Va. (medical services rendered George Vay).....		103.90		
Relief of Lieut. J. F. Taulbee.....		200.00		
Relief of Acting Dental Surg. Frank C. Cady.....		127.61		
Relief of Lieut. Joseph T. Clement.....		50.00		
Relief of Leland Stanford Junior University.....		450.01		
Relief of Pay Clerk H. G. Foster.....		350.48		
Relief of Pay Clerk S. R. Beard.....		168.80		
Relief of Pay Clerk Hastie A. Stewart.....		182.40		
Relief of Lieut. Col. Frederick T. Reynolds, Medical Corps, U. S. Army.....		323.90		
Relief of Capt. Leartus J. Owen, Medi- cal Corps, U. S. Army.....		191.67		
Relief of Capt. Adam E. Schlamser, Medical Corps, U. S. Army.....		278.00		
Relief of Capt. Jay D. Whitman, Medi- cal Corps, U. S. Army.....		86.80		
Relief of Capt. E. D. Kremers, Medi- cal Corps, U. S. Army.....		340.00		
Relief of Capt. L. B. McAfee, Medical Corps, U. S. Army.....		293.00		
Relief of Lieut. G. D. Graham, Medical Corps, U. S. Army.....		301.20		

Expenditures for the last fiscal year (1916), the estimates and appropriations for the present fiscal year (1917), and the estimates for the next fiscal year (1918)—Continued.

General object.	Expenditures for the fiscal year ended June 30, 1916.	Estimates for the fiscal year ending June 30, 1917.	Appropriations for the fiscal year ending June 30, 1917.	Estimates for the fiscal year ending June 30, 1918.
MILITARY ESTABLISHMENT—Continued.				
SUPPORT OF THE ARMY—continued.				
Quartermaster Corps—Continued.				
Payment for rent of buildings, Philippine Islands.....		\$1,722.42		
Reimbursement to Acting Dental Surg. Wm. A. Squires.....		290.79		
Medical Department:				
Medical and hospital department.....	\$745,450.10	8,164,105.95	\$4,500,000.00	\$1,494,000.00
Army Medical Museum and Library.....	12,582.59	15,000.00	15,000.00	15,000.00
Hospital care, Canal Zone garrisons.....	60,028.67	45,000.00	45,000.00	45,000.00
Replacing medical supplies.....	3,948.73			
Bureau of Insular Affairs:				
Care of insane Filipino soldiers.....	804.60	1,500.00	1,500.00	1,500.00
Care of insane soldiers, Porto Rico Regiment of Infantry.....		300.00	300.00	300.00
Engineer Department:				
Engineer depots.....	25,025.88	27,500.00	27,500.00	35,000.00
Engineer School, Washington, D. C....	25,029.04	25,000.00	31,000.00	30,000.00
Engineer equipment of troops.....	56,803.36	660,000.00	1,000,000.00	1,174,000.00
Civilian assistants to engineer officers...	39,994.36	75,000.00	75,000.00	75,000.00
Contingencies, engineer department, Philippine Islands.....	4,600.00	4,000.00	4,000.00	4,000.00
Building, Engineer School, Washington, D. C.....			9,000.00	202,500.00
Engineer operations in the field.....			100,000.00	300,000.00
Military surveys and maps.....				200,000.00
Ordnance Department:				
Ordnance service.....	330,668.64	375,000.00	475,000.00	425,000.00
Ordnance stores, ammunition.....	112,096.26	3,383,000.00	10,000,000.00	12,970,000.00
Small-arms target practice.....	608,295.70	1,515,000.00	3,000,000.00	2,500,000.00
Manufacture of arms.....	272,806.14	1,012,560.46	5,000,000.00	6,805,000.00
Ordnance stores and supplies.....	981,890.48	4,757,500.00	9,500,000.00	14,315,000.00
National trophy and medals for rifle contests.....	10,223.65	10,000.00	10,000.00	10,000.00
Automatic rifles (machine).....	35,336.54	1,400,000.00	6,000,000.00	2,085,000.00
Replacing ordnance and ordnance stores.	124,754.26			
Armored motor cars.....	46,491.28	150,000.00	500,000.00	1,508,000.00
Board to investigate Government manufacture of arms.....		12,000.00		
Total.....	106,597,266.10	241,651,409.25	232,586,080.10	242,421,361.22
Less repayment of funds heretofore reported as expended.....	39,096.88			
Total support of the Army (including pay of reserve corps and National Guard).....	106,558,169.22	241,651,409.25	232,586,080.10	242,421,361.22
RESERVE CORPS.				
Quartermaster supplies, equipment, etc., for reserve officers training corps.....				4,385,000.00
Ordnance stores, equipment, etc., for reserve officers training corps.....				550,000.00
Quartermaster supplies, equipment, etc., for the enlisted reserve corps.....				267,650.00
Signal equipment for the enlisted reserve corps.....				500,000.00
Total reserve corps.....				5,702,650.00
MILITARY ACADEMY.				
Pay of Military Academy.....	758,315.60	887,902.62	889,369.62	1,024,304.70
Current and ordinary expenses.....	136,872.79	156,029.20	159,330.00	172,745.00
Miscellaneous items and incidental expenses.	50,612.81	56,590.00	57,740.00	97,250.00
Buildings and grounds.....	89,017.99	364,266.65	118,603.95	764,373.60
Total Military Academy.....	1,034,819.19	1,464,788.47	1,225,043.57	2,058,673.30

Expenditures for the last fiscal year (1916), the estimates and appropriations for the present fiscal year (1917), and the estimates for the next fiscal year (1918)—Continued.

General object.	Expenditures for the fiscal year ended June 30, 1916.	Estimates for the fiscal year ending June 30, 1917.	Appropriations for the fiscal year ending June 30, 1917.	Estimates for the fiscal year ending June 30, 1918.
MILITARY ESTABLISHMENT—Continued.				
MILITIA.				
Encampment and maneuvers, Organized Militia.....	\$389,481.31	\$1,390,000.00	\$200,000.00	.....
Equipment of Coast Artillery armories, Organized Militia.....	18,197.47	.....	.....	.....
Field Artillery for Organized Militia.....	1,702,674.88	.....	.....	.....
Ammunition for Field Artillery, Organized Militia.....	2,059,633.54	.....	.....	.....
Exchanging or issuing new pistols, ammunition, etc., Organized Militia.....	5,408.25	.....	.....	.....
Care of horses and material, Field Artillery, Organized Militia.....	94,177.97	390,000.00	.....	.....
Ranges for Field Artillery target practice.....	.....	200,000.00	.....	.....
Subsistence, etc., officers and enlisted men of Organized Militia attending service schools.....	.....	30,000.00	.....	.....
Total militia	4,269,573.42	5,000,000.00	200,000.00	.....
NATIONAL GUARD.				
Arming, equipping, and training the National Guard.....	.....	.....	1,985,450.00	\$12,727,000.00
Arms, uniforms, equipment, etc., for field service, National Guard.....	.....	.....	2,000,000.00	4,576,000.00
Ranges for Field Artillery target practice, National Guard.....	.....	.....	300,000.00	.....
Supplying and exchanging Infantry equipment, National Guard.....	.....	1,200,000.00	400,000.00	800,000.00
Automatic rifles for National Guard.....	.....	.....	6,000,000.00	6,868,000.00
Field Artillery for National Guard.....	.....	.....	10,000,000.00	10,600,000.00
Ammunition for Field Artillery for National Guard.....	.....	.....	10,000,000.00	10,200,000.00
Total National Guard.....	.....	1,200,000.00	30,685,450.00	45,771,000.00
CIVILIAN MILITARY TRAINING.				
Civilian military training camps.....	.....	454,084.67	2,000,000.00	3,591,000.00
Military training camp, Fort Douglas, Utah.....	.....	.....	30,000.00	.....
Rifle ranges for civilian instruction.....	.....	.....	300,000.00	520,000.00
Quartermaster supplies, etc., for military equipment of schools and colleges.....	.....	.....	.....	80,000.00
Ordnance supplies, etc., for military equipment of schools and colleges.....	.....	.....	.....	550,000.00
Total civilian military training.....	.....	454,084.67	2,330,000.00	4,741,000.00
FORTIFICATIONS AND OTHER WORKS OF DEFENSE.				
Engineer Department:				
Gun and mortar batteries.....	427,798.37	2,611,500.00	2,378,500.00	3,777,000.00
Electrical installations at seacoast fortifications.....	37,982.24	110,000.00	.....	110,000.00
Sites for fortifications and seacoast defenses.....	2.80	1,867,000.00	1,400,000.00	100,000.00
Searchlights for harbor defenses.....	140,005.49	226,700.00	226,700.00	250,000.00
Preservation and repair of fortifications.....	168,128.62	250,000.00	250,000.00	300,000.00
Repair and protection of defenses of Pensacola, Fla.....	1,300.00	.....	.....	.....
Plans for fortifications.....	10,000.00	25,000.00	25,000.00	25,000.00
Supplies for seacoast defenses.....	47,587.52	40,000.00	40,000.00	40,000.00
Sea walls and embankments.....	23,950.00	.....	.....	93,000.00
Preservation and repair of torpedo structures.....	4,025.74	.....	.....	.....
Casemates, galleries, etc., for submarine mines.....	33,657.48	254,000.00	200,000.00	250,000.00
Fortifications in insular possessions.....	650,537.70	377,000.00	370,000.00	1,414,500.00
Sea wall, Sandy Hook, N. J.....	8,509.86	.....	.....	.....
Repair and restoration of defenses of Galveston, Tex.....	.....	303,500.00	303,500.00	.....
Roads, trails, water, and sewer systems, etc.....	.....	.....	.....	40,000.00

Expenditures for the last fiscal year (1916), the estimates and appropriations for the present fiscal year (1917), and the estimates for the next fiscal year (1918)—Continued.

General object.	Expenditures for the fiscal year ended June 30, 1916.	Estimates for the fiscal year ending June 30, 1917.	Appropriations for the fiscal year ending June 30, 1917.	Estimates for the fiscal year ending June 30, 1918.
MILITARY ESTABLISHMENT—Continued.				
FORTIFICATIONS AND OTHER WORKS OF DEFENSE—continued.				
Chief Signal Officer:				
Maintenance, etc., fire-control installations at seacoast defenses.....	\$132,375.58	\$130,000.00	\$130,000.00	\$150,000.00
Maintenance, etc., fire-control installations at seacoast defenses, insular possessions.....	9,378.54	10,000.00	10,000.00	15,000.00
Relief of Lieut. Col. Frank Greene, retired.....	138.90			
Ordnance Department:				
Armament of fortifications.....	2,127,230.91	14,628,500.00	15,970,500.00	45,628,000.00
Proving ground, Sandy Hook, N. J....	67,496.96	110,000.00	110,000.00	125,000.00
Submarine mines.....	92,131.12	690,231.00	217,000.00	177,637.50
Fortifications in insular possessions....	467,454.37	2,019,000.00	2,000,000.00	3,202,510.00
Submarine mines in insular possessions..	47,371.06	148,850.00	148,100.00	10,750.00
Radiodynamic torpedoes.....		947,000.00	1,167,000.00	
Board of Ordnance and Fortifications..	52,672.02	300,000.00	300,000.00	150,000.00
Special aids and appliances for manufacture of arms, ammunition, etc.....			1,000,000.00	500,000.00
Chief of Coast Artillery:				
Fire control at fortifications.....	60,666.49	617,982.80	600,000.00	608,796.21
Fire control in insular possessions.....	38,708.10	112,050.00	100,000.00	31,537.50
Maintenance, Coast Artillery war instruction.....	4,074.51	1,250.00	1,250.00	750.00
Total fortifications and other works of defense.....	4,662,184.38	25,779,623.80	26,947,550.00	56,999,481.21
ARSENALS.				
Ordnance Department:				
Augusta Arsenal, Augusta, Ga.....				5,000.00
Benicia Arsenal, Benicia, Cal.....	9,913.65	51,500.00	51,500.00	15,700.00
Frankford Arsenal, Philadelphia, Pa....	115,257.41	722,970.00	908,470.00	708,800.00
Rock Island Arsenal, Rock Island, Ill..	75,400.00	467,825.00	982,200.00	4,292,600.00
Rock Island power plant, Rock Island, Ill.....	12,411.64	12,500.00	12,500.00	12,500.00
Rock Island bridge, Rock Island, Ill....	36,174.91	18,000.00	18,000.00	20,000.00
Springfield Arsenal, Springfield, Mass..	22,611.41	25,500.00	32,600.00	190,000.00
Picatinny Arsenal, Dover, N. J.....	1,000.00	39,000.00	85,500.00	180,500.00
Proving Ground, Sandy Hook, N. J....	22,867.33	48,000.00	38,000.00	125,000.00
Watertown Arsenal, Watertown, Mass..	802.97	112,325.00	799,725.00	144,500.00
Testing machine.....	12,653.15	15,000.00	15,000.00	15,000.00
Watervliet Arsenal, West Troy, N. Y..	105,000.00	389,900.00	803,700.00	196,100.00
Ordnance depot, Manila, P. I.....		31,900.00		
Repairs of arsenals.....	318,751.06	350,000.00	350,000.00	400,000.00
San Antonio Arsenal.....		97,200.00	92,200.00	130,000.00
Ordnance depot, Honolulu, Hawaii.....		300,000.00	300,000.00	
Army powder factory.....			500,000.00	
Sodium nitrate storage.....		360,000.00	225,000.00	
Total.....	732,873.53	3,041,620.00	5,214,395.00	6,435,700.00
Less repayment of funds heretofore reported as expended.....	1,331.50			
Total arsenals.....	731,542.03	3,041,620.00	5,214,395.00	6,435,700.00
MILITARY POSTS AND MISCELLANEOUS.				
Quartermaster Corps:				
Military posts.....	187,165.01	127,650.00	127,000.00	7,067,080.24
Sewerage system, Fort Monroe, Va.....	9,045.40	14,461.00	9,359.99	9,359.99
Barracks and quarters seacoast defenses.	17,994.37	473,860.60	420,000.00	150,000.00
Seacoast defenses, Philippine Islands and Hawaii.....	519,259.15	139,177.40	69,600.00	178,450.00
Electric power plant, Corregidor Island, P. I.....	21.21			
Military prison, Fort Leavenworth, Kans.....	24,873.83			
Military post, Schofield Barracks, Hawaii.....		2,077,263.00	1,000,000.00	1,077,000.00
Purchase of land, Schofield Barracks, Hawaii.....		10,000.00		
Enlargement and reclamation of Fort Taylor, Key West, Fla.....				350,000.00

Expenditures for the last fiscal year (1916), the estimates and appropriations for the present fiscal year (1917), and the estimates for the next fiscal year (1918)—Continued.

General object.	Expenditures for the fiscal year ended June 30, 1916.	Estimates for the fiscal year ending June 30, 1917.	Appropriations for the fiscal year ending June 30, 1917.	Estimates for the fiscal year ending June 30, 1918.
MILITARY ESTABLISHMENT—Continued.				
MILITARY POSTS AND MISCELLANEOUS—continued.				
Engineer Department:				
Fort Riley Military Reservation, Kans. Buildings, Engineer School and post, Washington, D. C.....	\$38.22	.....	.....	.....
Military structures, Philippine Islands. Enlargement of Governors Island, N. Y. Fort Crockett Reservation, Galveston, Tex.....	15,036.75 7,900.00 6,884.50	\$23,000.00..........	...............	...............
Sandy Hook Reservation, N. J.....	.....	60,000.00	\$60,000.00	.....
Miscellaneous:				
Maps, War Department.....	7,750.90	22,000.00	7,500.00	\$10,000.00
Topographic maps, War Department.....	.....	97,000.00	35,000.00	.....
Purchase of filing equipment, etc.....	.....	45,000.00	.....	.....
Support of dependent families of enlisted men.....	.....	.....	2,000,000.00	.....
Total.....	795,969.34	3,089,411.40	3,727,859.99	8,841,890.23
Less repayment of funds heretofore reported as expended.....	2.64	.....	.....	.....
Total military posts and miscellaneous.....	795,966.70	3,089,411.40	3,727,859.99	8,841,890.23
Total Military Establishment.....	118,052,254.94	281,680,937.59	302,916,378.66	372,971,755.96
RIVERS AND HARBORS.				
Improvement of river and harbors (general improvement).....	.....	44,376,710.00	40,598,135.00	31,123,000.00
Improvement of rivers and harbors (continuing contracts).....	31,837,131.90	1,462,800.00	1,482,800.00	1,005,000.00
Relief of Lieut. Col. Mason M. Patrick, U. S. Army.....	.....	6.80	.....	6.80
Relief of Washington C. Braydhouse.....	.....	22.00	.....	22.00
Relief of certain civilian employees of Engineer Department at large, U. S. Army (dredge Comstock).....	.....	2,360.95	.....	2,360.95
Relief of Peter C. Grimm.....	.....	12.00	.....	12.00
Relief of crew of Government dredge C. W. Howell.....	.....	545.90	.....	545.90
Relief of Bouncer Hebron and Cary Caldwell.....	.....	25.00	.....	25.00
Relief of Italian bark Fenice.....	.....	872.96	.....	872.96
Relief of Robert G. Lynn.....	.....	154.75	.....	154.75
Relief of C. C. O'Donnell.....	.....	74.20	.....	74.20
Relief of Frank Vumbaca.....	.....	419.00	.....	419.00
Relief of crew of U. S. gasoline tender Perry.....	.....	218.60	.....	218.60
Relief of Col. William W. Harts, U. S. Army.....	.....	76.00	.....	.....
Relief of Oscar Thomson and others.....	.....	160.31	.....	160.31
Relief of the M. A. Sweeney Shipyards & Foundry Co.....	.....	.....	2,635.00	.....
Relief of Thos. J. Bye.....	.....	.....	500.00	.....
Relief of Drs. Blair & Blake, Dr. W. J. Maxwell, Dr. R. C. Evans, and J. B. Blalock.....	.....	.....	429.15	.....
Relief of Theodore Bagge for injuries.....	.....	.....	221.91	.....
Relief of Mrs. Joseph Cameron, widow of Joseph Cameron, for injuries.....	.....	.....	242.00	.....
Relief of United States Drainage & Irrigation Co.....	.....	.....	9,498.43	.....
Relief of Douglas J. Rollow.....	.....	.....	.....	20.00
Relief of John Simpson and Zorah E. Simpson.....	.....	.....	.....	100.00
Relief of Standard American Dredging Co.....	.....	.....	.....	3,020.72
Relief of Western Union Telegraph Co.....	.....	.....	.....	50.77
Total rivers and harbors.....	31,837,131.90	45,844,458.47	42,094,461.49	32,136,063.96

Expenditures for the last fiscal year (1916), the estimates and appropriations for the present fiscal year (1917), and the estimates for the next fiscal year (1918)—Continued.

General object.	Expenditures for the fiscal year ended June 30, 1916.	Estimates for the fiscal year ending June 30, 1917.	Appropriations for the fiscal year ending June 30, 1917.	Estimates for the fiscal year ending June 30, 1918.
RECAPITULATION.				
Civil Establishment (War Department proper):				
Salaries, contingent expenses, etc. (including Office of Public Buildings and Grounds).....	\$1,891,796.17	\$2,302,985.00	\$2,154,891.33	\$2,365,613.00
Civil public works and miscellaneous (exclusive of rivers and harbors):				
Military and national parks.....	399,674.88	565,149.00	553,760.00	435,844.00
Buildings and grounds in and around Washington.....	371,654.39	546,790.00	396,290.00	626,290.00
National cemeteries.....	297,857.45	564,299.60	364,020.00	352,320.00
Miscellaneous objects.....	417,666.87	453,260.00	725,760.00	1,016,060.00
National Home for Disabled Volunteer Soldiers.....	5,395,342.81	5,026,900.00	4,945,900.00	4,975,900.00
Miscellaneous relief acts, etc.....	1,067,749.89	.....	548,940.28	.....
Total Civil Establishment.....	9,841,742.46	9,459,383.60	9,689,561.61	9,772,027.00
Military Establishment:				
Support of the Army (including pay of Reserve Corps and National Guard).....	106,558,169.22	241,651,409.25	232,586,080.10	242,421,361.22
Reserve Corps.....	.....	.....	.....	5,702,650.00
Military Academy.....	1,034,819.19	1,464,788.47	1,225,043.57	2,058,673.30
Militia.....	4,269,573.42	5,000,000.00	200,000.00	.....
National Guard.....	.....	1,200,000.00	30,685,450.00	45,771,000.00
Civilian military training.....	.....	454,084.67	2,330,000.00	4,741,000.00
Fortifications.....	4,662,184.38	25,779,623.80	26,947,550.00	56,999,481.21
Arsenals.....	731,542.03	3,041,620.00	5,214,395.00	6,435,700.00
Military posts and miscellaneous.....	795,966.70	3,089,411.40	3,727,859.99	8,841,890.23
Total Military Establishment.....	118,052,254.94	281,680,937.59	302,916,378.66	372,971,755.96
Rivers and harbors.....	31,837,131.90	45,844,458.47	42,094,461.49	32,136,063.96
Grand total.....	159,731,129.30	336,984,779.66	354,700,401.76	414,879,846.92

Expenditures for the last fiscal year (1916), the estimates and appropriations for the present fiscal year (1917), and the estimates for the next fiscal year (1918)—Continued.

RECAPITULATION.

General object.	Increase of estimates for 1918 as compared with estimates for 1917.	Decrease of estimates for 1918 as compared with estimates for 1917.	Increase of estimates for 1918 as compared with appropriations for 1917.	Decrease of estimates for 1918 as compared with appropriations for 1917.
Civil Establishment (War Department proper):				
Salaries, contingent expenses, etc. (including Office of Public Buildings and Grounds).....	\$62,628.00	.....	\$210,721.67	.....
Civil public works and miscellaneous (exclusive of rivers and harbors):				
Military and national parks.....	.....	\$129,305.00	.....	\$117,916.00
Buildings and grounds in and around Washington.....	79,500.00	.....	230,000.00	.....
National cemeteries.....	.....	211,979.60	.....	11,700.00
Miscellaneous objects.....	562,800.00	.....	290,300.00	.....
National Home for Disabled Volunteer Soldiers.....	.....	51,000.00	30,000.00	.....
Miscellaneous relief acts, etc.....	.....	.....	.....	548,940.28
Military Establishment:				
Support of the Army (including pay of reserve corps and National Guard)...	769,951.97	.....	9,835,281.12	.....
Reserve corps.....	5,702,650.00	.....	5,702,650.00	.....
Military Academy.....	593,884.83	.....	833,629.73	.....
Militia.....	.....	5,000,000.00	.....	200,000.00
National Guard.....	44,571,000.00	.....	15,085,560.00	.....
Civilian military training.....	4,286,915.33	.....	2,411,000.00	.....
Fortifications.....	31,219,857.41	.....	30,051,931.21	.....
Arsenals.....	3,394,080.00	.....	1,221,305.00	.....
Military posts and miscellaneous.....	5,752,478.83	.....	5,114,030.24	.....
Rivers and harbors.....	.....	13,708,394.51	.....	9,958,397.53
Total.....	96,995,746.37	19,100,689.11	71,016,398.97	10,836,953.81
Less decrease.....	19,100,689.11	.....	.....	.....
Net increase of estimates for 1918 as compared with estimates for 1917...	77,895,067.26	.....	.....	.....
Less decrease.....	.....	.....	10,836,953.81	.....
Net increase of estimates for 1918 as compared with appropriations for 1917.....	.....	.....	60,179,445.16	.....

TABLE 2.

Statement of the appropriations of the preceding fiscal year (1916) for the Department of War, as required by the act of May 1, 1920 (R. S., sec. 228), showing the amount appropriated under each specific head of appropriation, the amount expended under each head, and the balance which, on the 30th day of June, 1916, remained unexpended, together with the amount covered into the surplus fund of the Treasury which is no longer required for expenditure.

Title of appropriation.	Balance July 1, 1915.	Appropriated July 1, 1915, to June 30, 1916.	Repayments July 1, 1915, to June 30, 1916.	Aggregate available.	Payments July 1, 1915, to June 30, 1916.	Carried to surplus fund June 30, 1916.	Balance June 30, 1916.
CIVIL ESTABLISHMENT.							
War Department, salaries, etc.							
		\$146,440.00		\$146,440.00	\$141,704.44		\$4,735.56
		724,870.00		724,870.00	718,136.00		6,734.00
		12,560.00		12,560.00	12,330.00		230.00
		26,600.00		26,600.00	26,520.00		80.00
		24,800.00		24,800.00	24,790.00		10.00
		376,620.00		376,620.00	369,770.00		6,850.00
		166,758.00		166,758.00	163,810.00		2,948.00
		91,610.00		91,610.00	91,310.00		300.00
		101,070.00		101,070.00	102,980.00		1,910.00
		87,230.00		87,230.00	84,740.00		2,490.00
		46,500.00		46,500.00	39,033.46		7,466.54
		20,000.00		20,000.00	19,933.60		66.40
		9,700.00		9,700.00	9,700.00		100.00
		250.00		250.00	150.00		100.00
	\$108.39			108.39			108.39
Total War Department, salaries, etc.	108.39	1,838,008.00		1,838,117.39	1,804,977.80		33,130.89
Public buildings and grounds in and around Washington.							
		83,000.00		83,000.00	80,492.00		2,508.00
		4,500.00		4,500.00	4,500.00		
		14,400.00		14,400.00	14,400.00		
of							
		201,050.00		201,050.00	200,157.31		892.69
		53,000.00		53,000.00	53,000.00		
		8,600.00		8,600.00	8,600.00		
		22,320.00		22,320.00	22,320.00		

REPORT OF THE SECRETARY OF WAR.

of the preceding fiscal year (1916) for the Department of War, as required by the act of May 1, 1920 (R. S., sec. 228), related under each specific head of appropriation, the amount expended under each head, and the balance which, on the 30th of June, 1916, remained unexpended, together with the amount covered into the surplus fund of the Treasury which is no longer required for

Title of appropriation.	Balances July 1, 1915.	Appropriated July 1, 1915, to June 30, 1916.	Repayments July 1, 1915, to June 30, 1916.	Aggregate available.	Payments July 1, 1915, to June 30, 1916.	Carried to surplus fund June 30, 1916.	Balances June 30, 1916.
CIVIL ESTABLISHMENT—Continued.							
Public buildings and grounds in and around Washington— Continued.							
va.....		\$500.00		\$500.00	\$500.00		
		200.00		200.00	200.00		
		14,320.00		14,320.00	14,320.00		
		100.00		100.00	100.00		
Total buildings and grounds in and around Wash- ington.....		402,080.00		402,080.00	398,589.31		\$3,490.69
War Department, salaries, etc.....	\$100.39	1,538,008.00		1,538,117.39	1,804,977.50		33,139.89
Buildings and grounds in and around Washington.....		402,080.00		402,080.00	398,589.31		3,490.69
Total War Department proper.....	100.39	2,240,088.00		2,240,197.39	2,203,566.81		36,521.59
PUBLIC WORKS.							
Military parks, etc.							
National Park.....	7,061.56	55,260.00		62,341.56	53,862.50		8,479.06
Adirondack Park.....	74.39	25,800.00		25,874.39	25,874.32		
Adirondack Park.....	1,292.75	45,000.00		46,292.75	37,860.21		8,432.54
Adirondack Park.....	4,449.28	36,000.00		40,449.28	36,000.00		4,449.28
Adirondack Park.....			\$100.28	100.28			100.28
Adirondack Park.....	53,532.75			53,532.75	45,915.52		7,617.23
Adirondack Park.....	105,627.66			105,627.66	189,450.50		6,177.06
Total military parks, etc.....	262,068.21	162,060.00	100.28	424,211.40	368,963.05		35,248.44
Repayments in excess of payments.....					103.28		
Actual expenditures.....					369,709.77		

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Statement of the appropriations of the preceding fiscal year (1916) for the Department of War, as required by the act of May 1, 1920 (R. S., sec. 223), showing the amount appropriated under each specific head of appropriation, the amount expended under each head, and the balance which, on the 30th day of June, 1916, remained unexpended, together with the amount covered into the surplus fund of the Treasury which is no longer required for expenditure—Continued.

Title of appropriation.	Balances July 1, 1915.	Appropriated July 1, 1915, to June 30, 1916.	Repayments July 1, 1915, to June 30, 1916.	Aggregate available.	Payments July 1, 1915, to June 30, 1916.	Carried to surplus fund June 30, 1916.	Balances June 30, 1916.
CIVIL ESTABLISHMENT—Continued.							
MISCELLANEOUS PUBLIC WORKS—Civil—Continued.							
Summary, Public works—Civil.							
Military parks, etc.	3262,059.21	3162,000.00		3494,118.21	3368,709.77		335,348.44
Monuments.	330,031.60	5,000.00		335,031.60	45,473.00		289,558.60
Miscellaneous public works—civil.	42,845.01	576,212.67		619,057.68	389,376.63	31,705.41	227,976.04
Total public works—civil.	634,934.82	5,000.00 738,272.67		1,378,207.49	823,621.40	1,705.41	552,890.08
MISCELLANEOUS.							
National cemeteries.							
Secretary's office:							
Men who	43,802.15			43,802.15	7,006.39		36,795.76
and, San-		1,250.00		1,250.00	809.75		440.25
ago, Ill.		250.00		250.00	250.00		
		250.00		250.00	250.00		
		120,000.00		120,000.00	115,881.35		3,118.65
		63,120.00		63,120.00	63,101.83		18.17
		80,000.00		80,000.00	47,014.61		2,985.39
		2,000.00		2,000.00	1,800.00		200.00
Hospital,		200.00		200.00			200.00
		12,000.00		12,000.00	11,666.75		333.25
	2,643.83	1,090.00		3,643.83	671.11		2,972.72
and civil		4,500.00		4,500.00	4,409.88		90.12
		57,500.00		57,500.00	46,152.71		11,347.29
Total national cemeteries.	46,546.68	312,070.00		358,616.68	300,104.38		58,511.30

Support of National Homes.

led Volunteer									
ldiers.....	.....	3,433,500.00	.....	3,433,500.00	.....	3,433,500.00	.....	3,433,500.00	4,003.39
iteer Soldiers,	97,772.47	.....	.....	.....	.....	97,772.47	.....	.....	97,772.47
.....	.....	167,500.50	.....	167,500.50	.....	167,500.50	.....	167,500.50	234.48
.....	2,945.76	.....	.....	.....	.....	2,945.76	.....	.....	2,945.76
soldiers and	2,906.55	.....	.....	.....	.....	2,906.55	.....	.....	2,906.55
.....	.....	1,100,000.00	.....	1,100,000.00	.....	1,100,000.00	.....	1,100,000.00	.....
Total, support of National Homes.....	108,714.78	4,931,000.50	.....	4,931,000.50	.....	5,034,724.28	.....	4,926,111.70	108,612.58
.....	25,407.89	102,300.40	.....	102,300.40	.....	127,708.29	.....	102,186.32	25,561.97
.....	753.62	.....	.....	.....	.....	753.62	.....	.....	753.62
.....	475,000.00	.....	.....	.....	.....	475,000.00	.....	2,055.88	472,944.12
.....	.....	.....	3.85	.....	.....	3.85	.....	.....	3.85
.....	5,650.06	.....	.....	.....	.....	5,650.06	.....	280.00	4,369.06
.....	21,514.70	.....	2,203.79	.....	.....	23,778.49	.....	.....	23,778.49
.....	.....	.....	816.05	.....	.....	816.05	.....	.....	816.05
.....	62,565.23	.....	.....	.....	.....	62,565.23	.....	460.85	62,124.38
.....	1,829.33	.....	.....	.....	.....	1,829.33	.....	5.46	1,823.87
.....	.....	96,000.00	.....	96,000.00	.....	96,000.00	.....	63,182.74	11,817.26
.....	.....	1,500.00	.....	1,500.00	.....	1,500.00	.....	1,000.00	500.00
.....	.....	3,000.00	.....	3,000.00	.....	3,000.00	.....	1,600.00	1,400.00
.....	750.00	.....	.....	.....	.....	750.00	.....	.....	750.00
.....	44,232.20	.....	.....	.....	.....	44,232.20	.....	1,558.53	42,673.66
.....	.....	50,000.00	.....	50,000.00	.....	50,000.00	.....	25,902.90	24,097.10
.....	.....	5,000.00	.....	5,000.00	.....	5,000.00	.....	3,804.75	1,195.25
.....	.....	3,623.14	.....	3,623.14	.....	3,623.14	.....	.....	.....
.....	.....	416.21	.....	416.21	.....	416.21	.....	416.21	.....
.....	.....	3,204.98	.....	3,204.98	.....	3,204.98	.....	3,204.98	.....
.....	1,004,747.85	.....	.....	.....	.....	1,004,747.85	.....	953,856.68	50,891.17
.....	4,911.64	.....	.....	.....	.....	4,911.64	.....	.....	4,911.64
.....	500.00	.....	.....	.....	.....	500.00	.....	.....	500.00
.....	228.06	.....	.....	.....	.....	228.06	.....	228.06	.....

Statement of the appropriations of the preceding fiscal year (1916) for the Department of War, as required by the act of May 1, 1920 (R. S., sec. 228), showing the amount appropriated under each specific head of appropriation, the amount expended under each head, and the balance which, on the 30th day of June, 1916, remained unexpended, together with the amount covered into the surplus fund of the Treasury which is no longer required for

Title of appropriation.	Balances July 1, 1915.	Appropriated July 1, 1915, to June 30, 1916.	Repayments July 1, 1915, to June 30, 1916.	Aggregate available.	Payments July 1, 1915, to June 30, 1916.	Carried to surplus fund June 30, 1916.	Balances June 30, 1916.
CIVIL ESTABLISHMENT—Continued.							
MISCELLANEOUS—Continued.							
<i>Miscellaneous objects—Continued.</i>							
Relief acts—Continued.	\$195.00			\$195.00			\$195.00
Relief of Little Nelson.							
Payment of volunteers, Cayuse Indian war in 1847 and 1848 in Oregon, certified claims.	1,108.83			1,108.83			1,108.83
Relief of persons for damages by explosion at Frankford Arsenal, Pa.	44.49			44.49			44.49
Claims for damages to property in Virginia, War with Spain.	347.00			347.00			347.00
Payment for damages to private property by gun firing.	56.72			56.72			56.72
Relief of persons for damages by fire at Rock Island.	13.35			13.35			13.35
.....	5,553.11			5,553.11			5,553.11
.....	2,983.00			2,983.00			2,983.00
.....	3,165.67			3,165.67			3,165.67
.....	54.00			54.00			54.00
.....	2,436.43			2,436.43			2,436.43
.....		99,488.43		99,488.43	99,488.43		
.....		1,912.40		1,912.40			1,912.40
.....		634.00		634.00	634.00		
.....	33,379.93	87,845.05		121,024.98	94,253.17		26,771.81
.....		4,655.06		4,655.06	4,655.06		
.....	50.15			50.15			50.15
.....	1,637,542.94	368,550.27	83,053.09	2,009,176.90	1,599,588.96		709,587.94
Actual expenditures.....					1,599,588.97		

	Total	National cemeteries	Support of National Homes	Miscellaneous objects	Total miscellaneous	War Department proper	Public works	Miscellaneous	Total civil establishment
Paid out on Treasury settlements during fiscal year 1916.....	484,887.03								
Total.....	3,590,379.26								
Deposits withdrawn, fiscal year 1916.....	1,411,828.38								
Balance available June 30, 1916.....	2,000,400.91								
Summary, miscellaneous.									
National cemeteries.....		46,845.08		312,070.00					
Support of National Homes.....		103,714.78		4,931,000.50					
Miscellaneous objects.....		1,687,842.94		368,550.27					
Total miscellaneous.....		1,837,803.40		5,611,620.77					
Summary, civil establishment.									
War Department proper.....		109.39		2,240,088.00					
Public works.....		634,834.82		5,000.00					
Miscellaneous.....		1,837,803.40		738,272.67					
Total civil establishment.....		2,472,847.61		5,000.00					
				8,550,900.44					

Property	380,000.00	380,000.00	380,000.00	317,589.54	102,400.46
	12,500.00	12,500.00	12,500.00	11,834.41	665.59
	45,000.00	45,000.00	45,000.00	39,903.59	5,096.41
	10,700.00	10,700.00	10,700.00	9,850.00	850.00
	45,987.00	45,987.00	45,987.00	32,639.10	13,347.90
	2,759.52	2,759.52	2,759.52	545.50	2,214.02
	86.65	86.65	86.65	86.65	
of Infantry	1,500.00	1,500.00	1,500.00	1,500.00	300.00
	300.00	300.00	300.00		
	787,500.00	787,500.00	787,500.00	719,818.41	67,681.59
	5,000.00	5,000.00	5,000.00	3,500.00	1,500.00
	10,000.00	10,000.00	10,000.00	5,007.75	4,992.25
	45,000.00	45,000.00	45,000.00	28,966.35	16,033.65
	25,000.00	25,000.00	25,000.00	24,862.30	137.70
	25,000.00	25,000.00	25,000.00	25,000.00	
	48,000.00	48,000.00	48,000.00	47,743.15	256.85
	40,000.00	40,000.00	40,000.00	40,000.00	
	4,000.00	4,000.00	4,000.00	4,000.00	
	345,000.00	345,000.00	345,000.00	321,733.57	23,266.43
	100,000.00	100,000.00	151,721.00	103,296.26	48,424.74
	800,000.00	800,000.00	902,436.77	610,522.58	291,914.19
	266,000.00	266,000.00	406,706.27	270,915.63	135,790.64
	1,644,000.00	1,644,000.00	1,749,123.82	977,807.96	771,315.84
	10,000.00	10,000.00	10,000.00	9,904.41	95.59
	150,000.00	150,000.00	194,421.00	35,336.54	119,084.46
	50,000.00	50,000.00	50,000.00	46,491.26	3,508.72
	50,000.00	50,000.00	690,645.06	97,238.81	693,406.25
Total, support of the Army	2,274,203.59	2,274,203.59	108,675,624.24	104,149,342.20	4,526,282.04
Repayments in excess of payments	105,050,769.12	105,050,769.12		33,206.85	
Actual expenditures				104,116,135.35	
Military Academy					
	10,000.00	772,592.37	782,592.37	762,805.10	19,787.27
		138,470.00	138,470.00	133,463.08	5,006.92
		50,840.00	50,840.00	50,840.00	
		90,211.00	90,211.00	90,129.90	81.10
	4,000.00		4,000.00		4,000.00
Total, Military Academy	14,000.00	1,032,113.37	1,036,113.37	1,042,638.08	24,074.69

of the preceding fiscal year (1916) for the Department of War, as required by the act of May 1, 1920 (R. S., sec. 228), related under each specific head of appropriation, the amount expended under each head, and the balance which, on the 30th day unexpended, together with the amount covered into the Treasury which is no longer required for

Title of appropriation.	Balances July 1, 1915.	Appropriated July 1, 1915, to June 30, 1916.	Repayments July 1, 1915, to June 30, 1916.	Aggregate available.	Payments July 1, 1915, to June 30, 1916.	Carried to surplus fund June 30, 1916.	Balances June 30, 1916.
MILITARY ESTABLISHMENT—Continued.							
<i>Organized Militia.</i>							
Arming and equipping the militia.	8041,225.12	82,000,000.00		82,941,225.12	82,233,432.44	\$10,766.82	8007,025.86
New arms and equipment for Organized Militia.	51,987.06			51,987.06			51,987.06
Field artillery for Organized Militia.	3,638,813.91			3,638,813.91	1,657,514.40		1,981,298.51
Exchanging or issuing new pistols, ammunition, etc., Organized Militia.	5,453.02			5,453.02	5,408.25		44.77
Ammunition for field artillery, Organized Militia.	3,438,028.45			3,438,028.45	3,059,754.50		1,378,271.95
Care of horses and material, Field Artillery, Organized Militia.		200,000.00		200,000.00	94,177.97		105,822.03
Furnishment and manuevers, Organized Militia.	476,011.52	200,000.00		676,011.52	386,173.38		290,838.14
Equipment of Coast Artillery, armories, Organized Militia.	125,000.16			125,000.16	18,683.83		106,316.33
Arms, uniforms, equipment, etc., Organized Militia.		1,645,664.67		1,645,664.67	1,645,664.67		
Total, Organized Militia.	8,676,577.24	4,045,664.67		12,722,241.91	8,009,779.44	10,766.82	4,611,462.65
<i>Fortifications.</i>							
Cannon.	955,603.65			955,603.65	427,798.37		527,805.28
Shells.	218,844.01			218,844.01	69,666.49		149,177.52
Fuses.	74,561.20			74,561.20	37,982.24		36,578.96
Mines.	19,797.64			19,797.64	2.80		19,794.84
Fortification for field artillery, Organized Militia.	220,216.57			220,216.57	140,005.49		80,211.08
Fortification for field artillery, Organized Militia.	4,238.65			4,238.65	4,074.51		164.14
Fortification for field artillery, Organized Militia.	153,455.02			153,455.02	168,128.02		16,326.40
Fortification for field artillery, Organized Militia.	1,526.00			1,526.00	1,300.00		226.00
Fortification for field artillery, Organized Militia.	41.03			41.03			41.03
Fortification for field artillery, Organized Militia.	10,000.00			10,000.00	10,000.00		
Fortification for field artillery, Organized Militia.	72,837.69			72,837.69	47,687.52		25,150.17
Fortification for field artillery, Organized Militia.	4,552.44			4,552.44	4,026.74		525.70
Fortification for field artillery, Organized Militia.	37,603.80			37,603.80	23,950.00		13,653.80
Fortification for field artillery, Organized Militia.	35,363.11			35,363.11	33,657.48		1,705.63
Fortification for field artillery, Organized Militia.	8,509.86			8,509.86	8,509.86		
Total, Fortifications.	1,574,756.66			1,574,756.66	640,637.70		934,118.96

End

Total fortifications.....	
<i>Arsenals.</i>	
Dover, N. J.....	
III.....	
Rock Island.....	
Total arsenals.....	
Repayments in excess of payments.....	
Actual expenditures.....	

Stat of the preceding fiscal year (1916) for the Department of War, as required by the act of May 1, 1910 (R. S., sec. 228), and the balance which, on the 30th day of June, 1916, was appropriated under each specific head of appropriation, the amount expended under each head, and the balance which, on the 30th day of June, 1916, was unexpended, together with the amount covered into the Treasury which is no longer required for

Title of appropriation.	Balances July 1, 1915.	Appropriated July 1, 1915, to June 30, 1916.	Repayments July 1, 1915, to June 30, 1916.	Aggregate available.	Payments July 1, 1915, to June 30, 1916.	Carried to surplus fund June 30, 1916.	Balances June 30, 1916.
MILITARY ESTABLISHMENT—Continued.							
<i>Military posts, etc.</i>							
.....	850,008.12	\$163,000.00	.....	8213,008.12	\$187,105.01	.....	926,843.11
.....	63,971.35	.....	.....	63,971.35	24,873.83	.....	39,097.52
.....	98,937.50	9,424.99	.....	9,424.99	9,424.99	.....	89,512.51
.....	19.10	.....	32.64	2.64	.....	.....	16.46
.....	20,021.04	25,000.00	.....	19.10	.....	.....	10.10
.....	412,436.41	358,000.00	.....	43,021.04	17,994.37	.....	27,026.67
.....	2,679.44	.....	.....	770,436.41	619,259.15	.....	261,177.26
.....	6,841.50	.....	.....	2,679.44	38.23	.....	2,641.22
.....	7,919.04	.....	.....	6,841.50	6,884.50	.....	10.04
.....	16,236.75	.....	.....	7,919.04	7,900.00	.....	300.00
.....	21.21	.....	.....	16,236.75	15,030.75	.....	.....
.....	678,134.46	555,424.99	2.64	21.21	21.21	.....	.....
Total military posts, etc.				1,233,502.09	788,596.03	.....	444,906.06
Repayments in excess of payments				.....	2.64	.....	.....
Actual expenditures				.....	788,593.39	.....	.....
<i>Miscellaneous.</i>							
Engineer Department:							
Maps, War Department		7,500.00	.....	.....	7,463.46	.....	36.54
Ordnance Department:							
International rifle competition, Camp Perry, Ohio	2,202.38	.....	.....	2,202.38	.....	.....	2,202.38
Total miscellaneous	2,202.38	7,500.00	.....	9,702.38	7,463.46	.....	2,238.92
<i>Summary, Military Establishment.</i>							
Support of the Army	1,317,444.68	3,374,203.59	.....	108,642,417.39	104,116,135.35	.....	4,526,282.04
Military Academy	14,000.00	106,650,769.12	.....	1,006,113.37	1,049,034.68	.....	24,074.89
Organized Militia	8,676,877.24	1,032,113.37	.....	12,722,241.91	8,000,779.44	.....	4,611,006.96
		4,045,664.67	.....			.....

Fortifications.....	10,633,360.18	131,008.09		10,764,368.27	4,794,728.86	34,221.92	6,006,407.59
Arsenals.....	26,837.48	63,506.03		746,363.56	647,616.34	434.03	97,212.59
Military posts.....	678,134.46	653,600.00		1,232,639.45	798,535.39		444,964.06
Miscellaneous.....	2,202.53	553,424.99		9,702.58	7,463.46		2,238.92
Total, Military Establishment.....	21,350,565.42	2,837,009.67 { 111,406,080.24		135,183,666.33	119,436,357.51	35,423.37	16,711,875.45
RIVERS AND HARBORS.							
Mo.....	76,200.00			76,200.00	32,943.47		43,256.53
.....	4,800.00			4,800.00	1,000.00		3,800.00
.....	8,000.00			8,000.00	1,000.00		4,000.00
.....	14,000.00			14,000.00	14,000.00		
.....	2,800.00			2,800.00	500.00		2,300.00
.....	20,800.00			20,800.00	11,500.00		9,300.00
.....	2,000.00			2,000.00	2,000.00		
.....	7,000.00			7,000.00			7,000.00
.....	146,510.13			146,510.13	69,980.16		76,529.97
.....	55,200.00			55,200.00			55,200.00
.....	84,600.00			84,600.00	8,000.00		26,800.00
.....	21,000.25			21,000.25	8,400.00		15,600.25
.....	65,000.00			65,000.00	56,300.00		8,700.00
.....	26,848.56			26,848.56	20,843.56		
.....	319.50			319.50	319.50		
.....	300.00			300.00			300.00
.....	54,618.91			54,638.91	44,028.27		10,610.64
.....	20,010.00			20,010.00	20,010.00		
.....	51,612.23			51,612.23	41,414.50		10,197.73
.....	27,200.00			27,200.00			27,200.00
.....	12,507.50			12,507.50	2,807.50		10,000.00
.....	3,000.00			3,000.00	2,309.51		690.49
oth- ver,	13,465.11			13,465.11	800.00		12,665.11
.....	2,670.53			2,670.53	600.57		2,069.96
.....	1,409.18			1,409.18	400.18		1,008.99
.....	4,000.00		4.00	4,004.00			4,004.00
.....	7,826.54			7,826.54			7,826.54
.....			134.17	134.17		134.17	
.....	100,530.66			100,530.66			100,530.66
.....	3.15			3.15			

14,337.60			14,337.60	14,337.60	10,900.00
20,900.00			20,900.00	10,000.00	
1,500.00			1,500.00		1,500.00
7,720.00			7,720.00		7,720.00
64,512.00			64,512.00	3,890.48	60,622.52
2,300.00			2,300.00	2,300.00	
753,044.50			753,044.50	526,000.00	228,044.50
253.05	371.20		624.25		624.25
5,106.21			5,106.21		2,358.10
4,081.19			4,081.19	2,750.11	4,081.19
2,594.27			2,594.27	2,594.27	
647.18			647.18	472.19	175.00
11,067.00	443.00		11,500.00		11,500.00
1,447.08	2,457.91		3,905.00		3,905.00
110.06			110.06		
214,007.10			214,007.10		
23,239.98			23,239.98		23,239.98
16,500.00			16,500.00	5.58	16,494.42
1.00			1.00	1.00	
5,223.50	1,700.49		6,923.99		6,923.99
100,000.00			100,000.00	2,000.00	98,000.00
1,000.00			1,000.00		1,000.00
7,713.50	701.46		8,414.96		8,414.96
58.05			58.05	58.05	
1,496.90			1,496.90	1,496.90	
4,000.00	500.00		4,000.00	500.00	500.00
250.00			250.00	133.82	116.18
6,053.68			6,053.68	6,053.68	
25.00			25.00	25.00	
158.67	831.33		1,000.00		1,000.00
140.50			140.50	31.20	59.30
1,800.52			1,800.52	1,800.52	
31,520.92			31,520.92	29,894.14	1,626.78
378,623.23			378,623.23	325,003.45	53,619.77
25			25		25
500.00			500.00	500.00	
34,736.02			34,736.02	33,219.10	1,516.92
101,867.46			101,867.46	12,626.20	89,241.26
32,674.00			32,674.00	9,999.00	22,675.00

Statement of the appropriations of the preceding fiscal year (1916) for the Department of War, as required by the act of May 1, 1890 (R. S., sec. 228), showing the amount appropriated under each specific head of appropriation, the amount expended under each head, and the balance which, on the 30th instant, remained unexpended, together with the amount covered into the Treasury which is no longer required for

Title of appropriation.	Balances July 1, 1915.	Appropriated July 1, 1915, to June 30, 1916.	Repayments July 1, 1915, to June 30, 1916.	Aggregate available.	Payments July 1, 1915, to June 30, 1916.	Carried to surplus fund June 30, 1916.	Balances June 30, 1916.
RIVERS AND HARBORS—Continued.							
.....	\$34,647.34	.....	.....	\$34,647.34	\$17,000.00	.....	\$17,647.34
.....	6,113.61	.....	.....	6,113.61	6,113.61	.....	.....
.....	16,604.39	.....	.....	16,604.39	16,604.39	.....	.....
.....	16,026.99	.....	.....	16,026.99	10,700.98	.....	5,326.01
.....	144,000.40	.....	.....	144,000.40	89,887.75	.....	54,112.65
.....	912.68	.....	.....	912.68	912.68	.....	.....
.....	312,802.01	.....	.....	312,802.01	146,288.45	.....	166,513.56
.....	3,781.72	.....	1300.00	4,081.72	.....	.....	4,081.72
.....	1,804.88	.....	.....	1,804.88	1,501.87	.....	303.01
.....	9,000.00	.....	.....	9,000.00	9,000.00	.....	.....
.....	2,000.00	.....	.....	2,000.00	2,000.00	.....	.....
.....	305,925.31	.....	.....	305,925.31	137,574.16	.....	168,351.15
.....	1,000.00	.....	.....	1,000.00	500.00	.....	500.00
.....	335,880.93	.....	.....	335,880.93	169,380.11	.....	166,500.82
.....	2,374.25	.....	.....	2,374.25	.....	.....	2,374.25
.....	8,279.56	.....	.....	8,279.56	8,279.56	.....	.....
.....	1,522.72	.....	.....	1,522.72	1,522.72	.....	.....
.....	80	.....	.....	80	80	.....	.....
WTL	10,691.36	.....	700.00	10,691.36	10,691.36	.....	700.00
.....	53.72	.....	.....	53.72	7.06	.....	46.66
.....	3,399.49	.....	.....	3,399.49	.....	.....	3,399.49
.....	126.58	.....	.....	126.58	100.00	.....	26.58
.....	378.17	.....	.....	378.17	.....	.....	378.17
.....	155,332.60	.....	.....	155,332.60	68,613.33	.....	91,719.27
.....	24,000.00	.....	.....	24,000.00	.....	.....	24,000.00
.....	1,672.04	.....	.....	1,672.04	.....	.....	1,672.04
.....	26,000.00	.....	.....	26,000.00	6,886.14	.....	19,113.86
.....	9,399.43	.....	.....	9,399.43	9,399.43	.....	.....
.....	2,500.00	.....	.....	2,500.00	2,500.00	.....	.....

Harbor at—	14, 337.00	20, 900.00	14, 337.00	20, 900.00	14, 337.00	20, 900.00	14, 337.00	20, 900.00
Wilmington, Del.....	.....	.....	.....	.....	.....	.....	.....	.....
Baltimore, Md.....	.....	.....	.....	.....	.....	.....	.....	.....
and wick, tokin	.....	.....	.....	.....	.....	.....	.....	.....
.....	1, 500.00	7, 720.00	1, 500.00	7, 720.00	1, 500.00	7, 720.00	1, 500.00	7, 720.00
.....	64, 512.00	2, 300.00	64, 512.00	2, 300.00	64, 512.00	2, 300.00	64, 512.00	2, 300.00
.....	753, 044.50	.....	753, 044.50	.....	753, 044.50	.....	753, 044.50	.....
.....	253.05	.....	253.05	.....	253.05	.....	253.05	.....
.....	5, 105.21	.....	5, 105.21	.....	5, 105.21	.....	5, 105.21	.....
.....	4, 051.19	.....	4, 051.19	.....	4, 051.19	.....	4, 051.19	.....
.....	2, 594.27	.....	2, 594.27	.....	2, 594.27	.....	2, 594.27	.....
Louis	.....	.....	.....	.....	.....	.....	.....	.....
.....	647.19	.....	647.19	.....	647.19	.....	647.19	.....
.....
.....	11, 057.00	.....	11, 057.00	.....	11, 057.00	.....	11, 057.00	.....
.....	1, 447.09	.....	1, 447.09	.....	1, 447.09	.....	1, 447.09	.....
.....	110.05	.....	110.05	.....	110.05	.....	110.05	.....
.....	214, 007.10	.....	214, 007.10	.....	214, 007.10	.....	214, 007.10	.....
.....	23, 239.98	.....	23, 239.98	.....	23, 239.98	.....	23, 239.98	.....
.....	16, 500.00	.....	16, 500.00	.....	16, 500.00	.....	16, 500.00	.....
.....	1.00	.....	1.00	.....	1.00	.....	1.00	.....
.....	5, 223.50	.....	5, 223.50	.....	5, 223.50	.....	5, 223.50	.....
.....
.....	100, 000.00	.....	100, 000.00	.....	100, 000.00	.....	100, 000.00	.....
.....	1, 000.00	.....	1, 000.00	.....	1, 000.00	.....	1, 000.00	.....
.....	7, 713.50	.....	7, 713.50	.....	7, 713.50	.....	7, 713.50	.....
.....	53.05	.....	53.05	.....	53.05	.....	53.05	.....
.....	1, 495.90	.....	1, 495.90	.....	1, 495.90	.....	1, 495.90	.....
Missi	.....	.....	.....	.....	.....	.....	.....	.....
.....
.....	4, 000.00	.....	4, 000.00	.....	4, 000.00	.....	4, 000.00	.....
.....	250.00	.....	250.00	.....	250.00	.....	250.00	.....
.....	6, 053.08	.....	6, 053.08	.....	6, 053.08	.....	6, 053.08	.....
.....	25.00	.....	25.00	.....	25.00	.....	25.00	.....
.....	103.67	.....	103.67	.....	103.67	.....	103.67	.....
.....	140.50	.....	140.50	.....	140.50	.....	140.50	.....
Tex.	1, 800.52	.....	1, 800.52	.....	1, 800.52	.....	1, 800.52	.....
Tex.	31, 520.92	.....	31, 520.92	.....	31, 520.92	.....	31, 520.92	.....
Tex.	378, 623.22	.....	378, 623.22	.....	378, 623.22	.....	378, 623.22	.....
.....	26	.....	26	.....	26	.....	26	.....
.....	500.00	.....	500.00	.....	500.00	.....	500.00	.....
Galveston, Tex.....	34, 736.02	.....	34, 736.02	.....	34, 736.02	.....	34, 736.02	.....
Cleveland, Ohio.....	101, 867.46	.....	101, 867.46	.....	101, 867.46	.....	101, 867.46	.....
Ashtabula, Ohio.....	32, 674.00	.....	32, 674.00	.....	32, 674.00	.....	32, 674.00	.....

Statement of the appropriations of the preceding fiscal year (1916) for the Department of War, as required by the act of May 1, 1920 (R. S., sec. 228), showing the amount appropriated under each specific head of appropriation, the amount expended under each head, and the balance which, on the 30th day of June, 1916, remained unexpended, together with the amount covered into the Treasury which is no longer required for expenditure—Continued.

Title of approp	Repayments July 1, 1915, to June 30, 1916.			
RIVERS AND HARB				
Gauging waters of the Mississippi River and its tributaries.....		108,362.73	\$108,103.79	\$253.94
Examinations and surveys at South Pass, Mississippi River.....	9,000.00	9,000.00	8,800.00	800.00
Removing obstructions in Mississippi, Atchafalaya, and Old Rivers.....	10,000.00	10,000.00	10,000.00	.....
Operating snag and dredge boats on upper Mississippi.....	100,000.00	100,000.00	98,002.26	6,997.73
.....	25,000.00	25,000.00	24,408.31	591.69
.....	25,413.29	25,413.29	17,006.47	8,407.82
.....	2,500.00	2,500.00	2,800.00	.....
.....	9,812.66	9,812.66	9,812.66	.....
.....	127,428.08	127,428.08	450.06	126,978.03
.....	3,000.00	3,000.00	1,000.00	2,000.00
.....	2,522.66	2,522.66	518.90	2,003.76
.....	2,800.00	2,800.00	2,000.00	800.00
.....	190.69	190.69	190.69	.....
.....	2,957.15	2,957.15	.....	2,957.15
.....	255,003.85	255,003.85	1,466.00	253,537.85
.....	6,918.01	6,918.01	6,699.25	218.76
.....	4,135.29	4,135.29	4,064.02	71.26
.....	42,130.68	42,130.68	42,130.68	.....
.....	408.08	408.08	408.08	.....
.....	21,734.71	21,734.71	21,232.93	501.78
.....	10,294.20	10,294.20	10,294.20	.....
.....	2.00	2.25	.....	2.25
.....	7.02	7.02	7.02	.....
.....	9,999.25	9,999.25	2,999.25	7,000.00
.....	8,576.91	8,576.91	.....	8,576.91
.....	9,000.00	9,000.00	.....	9,000.00

	1919	1920	1921
Ala.	6,402.62	8,402.53	2,796.95
	109,996.70	109,996.70	98,518.45
	663.39	663.39	663.39
	1,619.66	1,619.66	1,619.66
	571.26	571.26	571.26
	63,535.53	63,535.53	66,094.02
	127,342.59	127,342.59	38,998.75
	152,348.27	152,348.27	119,371.98
	4,016,134.28	4,016,134.28	2,342,388.18
	50,000.00	50,000.00	35,450.00
	53,715.20	53,715.20	26,500.00
	1,796.74	8,135.00	3,135.00
	25.00	25.00	25.00
	5,500.00	5,500.00	5,500.00
	3,998.15	3,998.15	3,998.15
	497,541.32	497,541.32	294,772.65
River,	191.19	426.03	426.03
	1,980.96	1,980.96	1,980.96
	1,849.80	1,849.80	1,849.80
	225.28	249.57	249.57
	35,122.99	35,122.99	13,178.66
	10,088.04	10,510.96	10,510.96
	34,154.58	34,154.58	16,705.79
	30,000.70	30,000.70	30,000.70
	26,073.66	26,073.66	26,073.66
	294,104.91	294,104.91	214,360.66
	13,991.08	13,991.08	13,211.07
	854.75	854.75	854.75
	181,633.81	181,633.81	22,783.81
	6,275.16	6,275.16	6,275.16
	4,515.40	4,515.40	4,515.40
	68,028.44	68,028.44	8,028.44
	34,600.66	34,600.66	1,600.66
	258.89	258.89	258.89
Port-	1,134.89	1,134.89	1,134.89
	18,298.96	18,298.96	18,298.96
	2,629.30	2,629.30	2,629.30
	189,000.00	189,000.00	58,048.06
	15,000.00	15,000.00	4,000.00
	27.94	27.94	27.94
	812.16	478.47	478.47
	5,511.16	7,761.46	7,761.46
S. and	18,476.00	18,476.00	18,476.00
Wash.	743.63	743.63	96.10

Statement of the appropriations of the preceding fiscal year (1916) for the Department of War, as required by the act of May 1, 1920 (R. S., sec. 228), showing the amount appropriated under each specific head of appropriation, the amount expended under each head, and the balance which, on the 30th day of June, 1916, remained unexpended, together with the amount covered into the surplus fund of the Treasury which is no longer required for expenditure—Continued.

Title of appropriation.	Balances July 1, 1915.	Appropriated July 1, 1915, to June 30, 1916.	Repayments July 1, 1915, to June 30, 1916.	Aggregate available.	Payments July 1, 1915, to June 30, 1916.	Carried to surplus fund June 30, 1916.	Balances June 30, 1916.
RIVERS AND HARBORS—Continued.							
Ice and Bridge-			\$701.64	\$701.64			\$701.64
ed with Lakes							
	\$491,301.03			491,301.03	\$373,277.35		119,023.68
	258.20			258.20			
ers, Wash. and	4,000.00			4,000.00	4,000.00		
ert and Kettle							
	.54			.54	.54		
	30,500.00		2,000.46	22,500.46			22,500.46
	32,011.50			32,011.50	967.42		31,024.08
	6,515.00		184.00	6,699.00			6,699.00
	23,631.33		3,171.24	26,802.57			26,802.57
	34,432.19			34,432.19	16,478.57		17,953.62
			1,365.42	1,365.42			1,365.42
	625.00		879.84	904.84			904.84
	200.00		749.96	949.96			949.96
	12,239.07		4,213.06	16,452.13		\$16,452.13	
	120,847.26			120,847.26	15,657.80		104,689.46
Preservation and maintenance of river and harbor works.							
Emergencies in river and harbor works.							
Contingencies of rivers and							
craft obstructing or endan-	39,847.80			39,847.80	32,854.46		6,993.04
ing and other works of naviga-		\$59,843.17		59,843.17	50,843.17		
tion		2,100,437.28		2,100,437.28	2,100,437.28		
d water power, Muskingum							
ment of existing river and	202.43			202.43			202.43
harbor works.	12,560,534.33	25,000,000.00		37,560,534.33	20,728,689.45		17,162,144.88
Total rivers and harbors.	31,260,385.29	27,544,840.45	93,589.46	58,806,856.43	31,532,219.01	1,089,361.64	26,877,274.71
Repayments in excess of payments.					93,589.46		
Actual expenditures.					31,838,029.39		

Statements of the appropriations of the preceding fiscal year (1916) for the Department of War, as required by the act of May 1, 1920 (R. S., sec. 228), showing the amount appropriated under each specific head of appropriation, the amount expended under each head, and the balance which, on the 30th day of June, 1916, remained unexpended, together with the amount covered into the surplus fund of the Treasury which is no longer required for expenditure—Continued.

Title of appropriation.	Balances July 1, 1915.	Appropriated July 1, 1915, to June 30, 1916.	Repayments July 1, 1915, to June 30, 1916.	Aggregate available.	Payments July 1, 1915, to June 30, 1916.	Earned to surplus fund June 30, 1916.	Balances June 30, 1916.
RIVERS AND HARBORS—Continued.							
do.—Continued							
at of							
neck,							
1.....	\$5,450.00						
116....	5,450.00						
1 Grays							
16.....	15,000.00						
1916....	14,000.00						
Balance on hand June 30, 1916.....	932.06						
Funds contributed for improvement of							
Niagara River, N. Y. (act July 25, 1912)—							
Balance on hand July 1, 1915.....	21,562.50						
Expended during the fiscal year 1916....	18,500.00						
Balance on hand June 30, 1916.....	3,062.50						
Funds contributed for improvement of							
Savannah River at Augusta, Ga. (act June							
25, 1910)—							
Balance on hand July 1, 1915.....	10,000.00						
Expended during the fiscal year 1916....	10,000.00						
Funds contributed for improvement of							
Mississippi River at Delta, Mo. (act							
Mar. 4, 1913)—							
Balance on hand July 1, 1915.....	90,000.00						
Receipts during the fiscal year 1916....	90,000.00						
Total.....	110,000.00						
Expended during the fiscal year 1916....	110,000.00						

Statement of the appropriations of the preceding fiscal year (1916) for the Department of War, as required by the act of May 1, 1890 (R. S., sec. 228), showing the amount appropriated under each specific head of appropriation, the amount expended under each head, and the balance which, on the 30th day of June, 1916, remained unexpended, together with the amount covered into the surplus fund of the Treasury which is no longer required for expenditure—Continued.

Title of appropriation.	Balances July 1, 1915.	Appropriated July 1, 1915, to June 30, 1916.	Repayments July 1, 1915, to June 30, 1916.	Aggregate available.	Payments July 1, 1915, to June 30, 1916.	Carried to surplus fund June 30, 1916.	Balances June 30, 1916.
RIVERS AND HARBORS—Continued.							
Total.....	771,176.39						
Expended during the fiscal year 1916.....	180,026.39						
Transferred to "Return of funds contributed for river and harbor works." 26,500.00	689,650.65						
Balances June 30, 1916.....	131,508.74						
RECAPITULATION.							
Civil establishment.....	82,472,847.61	\$5,000,000		\$11,087,538.08	\$9,542,908.59	\$1,708.41	\$1,533,228.08
Military establishment.....	21,350,586.42	2,337,000.67		135,183,556.33	119,436,337.51	35,423.37	15,711,875.45
Rivers and harbors.....	31,260,385.26	111,496,083.24		55,805,265.74	31,338,638.39	1,049,361.04	25,877,274.71
Total.....	55,083,799.33	2,342,000.67		206,086,760.12	150,817,886.46	1,126,490.42	43,112,873.24

Statement of balances of appropriations made by Congress for the use of the War Department for the fiscal year ending June 30, 1916, showing the amounts drawn by requisition upon the Treasury during the fiscal year ending June 30, 1916, in settlement of outstanding liabilities created during the fiscal year 1915 and the balances remaining in the Treasury subject to requisition July 1, 1916—Continued.

Title of appropriation.	Balances July 1, 1916.	Appropriated July 1, 1915, to June 30, 1916.	Repayments July 1, 1915, to June 30, 1916.	Aggregate available.	Payments July 1, 1915, to June 30, 1916.	Carried to surplus fund June 30, 1916.	Balances June 30, 1916.
CIVIL ESTABLISHMENT—Continued.							
Public buildings and grounds in and around Washington—Com.							
Engineer Department—Continued.							
Repairs to building where Abraham Lincoln died.....			\$10.87	\$10.87			\$10.87
Care and maintenance of Washington Monument.....			987.79	987.79			987.79
Improvements, birthplace of Washington, Wakefield, Va.....			100.00	100.00			100.00
Total buildings and grounds in and around Washing- ton.....	\$16,203.60		5,724.82	21,927.92	\$15,936.13		5,991.80
Repayments in excess of payments.....					5,724.82		
Actual expenditures.....					10,211.80		
War Department salaries, etc.....	42,010.35			42,010.35	4,183.03		37,827.32
Buildings and grounds in and around Washington.....	16,203.60			16,203.60	10,211.80		5,991.80
Total War Department proper.....	58,213.95			58,213.95	14,394.83		43,819.12
PUBLIC WORKS.							
Military parks, etc.							
Adams Park.....	389.95			389.95	226.28		163.67
.....	.51			.51	.51		
.....	429.30			429.30	426.45		3.84
.....	3,078.49			3,078.49	2,366.49		720.00
Total Park.....	713.10		669.82	1,712.62			1,712.62
Adams Park.....	5,185.97			5,185.97	4,540.87		645.10
Total military parks, etc.....	9,705.36		669.82	10,794.68	7,552.55		3,242.33
Repayments in excess of payments.....					990.53		
Actual expenditures.....					6,563.03		

[illegible]

[illegible]


.....	9,121.20	.....	9,121.20	.....	5,721.19	.....	398.10
.....	8,942.94	.....	8,942.94	.....	8,800.00	.....	142.94
.....	98,448.92	.....	98,448.92	.....	97,723.12	.....	725.80
.....	2,339.90	.....	2,339.90	.....	1,981.34	.....	358.56
.....	4,674.80	.....	4,674.80	.....	3,980.26	.....	685.54
.....	987.40	.....	987.40	.....	323.44	.....	664.96
.....	27,206.26	.....	27,206.26	.....	27,128.34	.....	77.91
Total support of the Army.....	4,697,861.06	.....	653,290.50	.....	2,974,208.59	.....	1,192,787.79
Repayments in excess of payments.....	.....	.....	.....	.....	3,295,952.79	.....	.....
Actual expenditures.....	.....	.....	.....	.....	655,290.50	.....	.....
<i>Military Academy.</i>							
Pay of Military Academy.....	14,808.61	.....	3,841.23	.....	18,650.84	.....	18,650.84
Current and ordinary expenses, Military Academy.....	34.11	.....	1,890.89	.....	1,825.00	.....	1,825.00
Miscellaneous items and incidental expenses, Military Academy.....	.....	.....	.....	.....	.....	.....	.....
Buildings and grounds, Military Academy.....	.....	.....	227.19	.....	227.24	.....	227.24
Total Military Academy.....	14,842.77	.....	1,111.91	.....	1,111.91	.....	1,111.91
<i>Organized Militia.</i>							
.....	53,238.29	.....	120.96	.....	53,238.29	.....	5,077.81
.....	17,034.41	.....	.....	.....	17,034.41	.....	120.96
.....	.....	.....	.....	.....	380,778.46	.....	13,860.08
Total Organized Militia.....	70,272.70	.....	120.96	.....	451,172.12	.....	22,048.85
Repayments in excess of payments.....	.....	.....	.....	.....	429,123.27	.....	.....
Actual expenditures.....	.....	.....	.....	.....	120.96	.....	.....
.....	.....	.....	.....	.....	429,002.31	.....	.....
.....	57,131.36	.....	.....	.....	57,131.36	.....	.....
.....	.....	.....	30.17	.....	30.17	.....	.....
.....
.....	379.85	.....	.....	.....	409.02	.....	.....
.....	5,674.91	.....	.....	.....	5,674.91	.....	.....
.....	500.00	.....	.....	.....	500.00	.....	.....
.....	83,860.81	.....	.....	.....	83,860.81	.....	.....
Total arsenals.....	147,546.93	.....	60.80	.....	147,606.82	.....	.....
Repayments in excess of payments.....	.....	.....	.....	.....	62,808.08	.....	1,088.00
Actual expenditures.....	.....	.....	.....	.....	88,712.74	.....	.....
.....	.....	.....	.....	.....	88,652.85	.....	.....


Statement of balances of appropriations made by Congress for the use of the War Department for the fiscal year ending June 30, 1915, showing the amounts drawn by requisition upon the Treasury during the fiscal year ending June 30, 1916, in settlement of outstanding liabilities created during the fiscal year 1915 and the balances remaining in the Treasury subject to requisition July 1, 1916—Continued.

Title of appropriation.	Balances July 1, 1915.	Appropriated July 1, 1915, to June 30, 1916.	Repayments July 1, 1915, to June 30, 1916.	Aggregate available.	Payments July 1, 1915, to June 30, 1916.	Carried to surplus fund June 30, 1916.	Balances June 30, 1916.
MILITARY ESTABLISHMENT—Continued.							
<i>Military posts, etc.</i>							
Quartermaster Corps: Sewerage system, Fort Monroe, Va.....			\$379.59	\$379.59			\$379.59
Total military posts, etc.....			379.59	379.59			379.59
<i>Miscellaneous.</i>							
Engineer Department: Maps, War Department.....	\$350.00			350.00	\$287.44		62.56
Total miscellaneous.....	350.00			350.00	287.44		62.56
<i>Summary, Military Establishment.</i>							
Support of the Army.....	4,897,861.05	\$1,199,772.62		6,097,633.67	{ 2,274,203.59		1,192,767.79
Military Academy.....	14,843.77		6,771.22	21,614.99	{ 2,630,662.29		21,614.99
Organized Militia.....	70,272.70	380,778.46		451,051.16	429,002.31		22,048.85
Arsenals.....	147,546.93			147,546.93	{ 62,806.08		1,088.00
Military posts, etc.....			379.59	379.59	{ 83,652.85		379.59
Miscellaneous.....	350.00			350.00	287.44		62.56
Total Military Establishment.....	6,130,874.45	1,580,551.08	7,150.81	6,718,576.34	{ 2,337,009.67		1,237,961.78
Repayments in excess of payments.....					{ 3,143,604.89		
Actual expenditures.....					7,150.81		
RIVERS AND HARBORS.							
Engineer Department: Maintenance of South Pass Channel, Mississippi River..	353.95			353.95	353.95		
Gauging waters of the Mississippi River and its tribu- taries.....	925.00		394.01	1,319.01			1,319.01
Removing obstructions in Mississippi, Atchafalaya, and							

Old River.....	300.94	1,745.00	2,046.94	.....	.....	2,046.94
Operating snag and dredge boats on upper Mississippi, Illinois, and Minnesota Rivers.....	228.59	778.84	1,007.43	.....	.....	1,007.43
Operating snag boats on the Ohio River.....	1,080.91	.....	1,080.91	1,087.41	.....	13.59
Total rivers and harbors.....	2,609.39	2,518.85	5,808.24	1,421.36	.....	4,386.88
Less payments.....	.....	1,421.36	.....	.....	.....	.....
Repayments in excess of payments.....	.....	1,097.49	.....	.....	.....	.....
RECAPITULATION.						
Civil establishment.....	915,173.82	15,910.41	931,080.23	5,000.00	.....	332,535.74
	.....	.....	.....	563,554.46	.....	.....
Military Establishment.....	5,130,874.45	1,530,551.08	6,711,426.53	2,337,009.67	.....	1,257,931.75
Rivers and harbors.....	2,839.39	.....	4,386.88	3,136,454.08	.....	4,386.88
Total.....	6,048,937.66	15,910.41	7,646,902.64	2,342,009.67	.....	1,574,864.40
Repayments in excess of payments.....	.....	1,530,551.08	.....	3,730,009.57	.....	.....
Actual expenditures.....	.....	.....	.....	1,497.49	.....	.....

TABLE 4.

Stat.  le by Congress for *War Department for the* ending June 30, 1916, *ending June 30, 1914, showing the*
Treasury during *of outstanding liabilities created*
covered into the surplus fund of the Treasury by operation of law (18 Stat., 110).

Title of appropriations.	Balances July 1, 1915.	Appropriated July 1, 1915, to June 30, 1916.	Repayments July 1, 1915, to June 30, 1916.	Aggregate available.	Payments July 1, 1915, to June 30, 1916.	(carried to surplus fund June 30, 1916.	Balances June 30, 1916.
CIVIL ESTABLISHMENT.							
War Department salaries, etc.							
	34,959.84	.....	.....	34,959.84	.....	34,959.84	.....
	18,326.99	.....	.....	18,326.99	.....	18,326.99	.....
	35.00	.....	.....	35.00	.....	35.00	.....
Total, United States	66.90	.....	.....	66.90	.....	66.90	.....
	72.77	.....	.....	72.77	.....	72.77	.....
	4,384.97	.....	.....	4,384.97	86.00	4,379.97	.....
	3,625.42	.....	.....	3,625.42	.....	3,625.42	.....
	774.98	.....	.....	774.98	.....	774.98	.....
	1,285.62	.....	.....	1,285.62	.....	1,285.62	.....
	3,849.75	.....	.....	3,849.75	.....	3,849.75	.....

Statement of balances of appropriations made by Congress for the use of the War Department for the fiscal year ending June 30, 1914, showing the amounts drawn by requisition upon the Treasury during the fiscal year ending June 30, 1916, in settlement of outstanding liabilities created during the fiscal year 1914 and the amounts covered into the surplus fund of the Treasury by operation of law (18 Stat., 110)—Continued.

Title of appropriation.	Balances July 1, 1915.	Appropriated July 1, 1915, to June 30, 1916.	Repayments July 1, 1915, to June 30, 1916.	Aggregate available.	Payments July 1, 1915, to June 30, 1916.	Carried to surplus fund June 30, 1916.	Balances June 30, 1916.
CIVIL ESTABLISHMENT—Continued.							
<i>War Department salaries, etc.—Continued.</i>							
.....	\$1,973.54	.....	.....	\$1,973.54	\$2.26	\$1,971.29	.....
.....	6,907.20	.....	.....	6,907.20	.....	6,907.20	.....
.....	2,236.57	.....	.....	2,236.57	.....	2,236.57	.....
Department.....	325.00	.....	.....	325.00	.....	325.00	.....
Total War Department salaries, etc.....	48,824.55	.....	.....	48,824.55	7.25	48,817.30	.....
<i>Public buildings and grounds in and around Washington.</i>							
.....	1,123.89	.....	.....	1,123.89	.....	1,123.89	.....
.....	56.65	.....	.....	56.65	.....	56.65	.....
.....	123.76	.....	.....	123.76	.....	123.76	.....
.....	405.73	.....	.....	405.73	.....	405.73	.....
.....	602.76	.....	.....	602.76	.....	602.76	.....
.....	374.38	.....	.....	374.38	.....	374.38	.....
.....	1,040.54	.....	.....	1,040.54	.....	1,040.54	.....
.....	.36	.....	.....	.36	.....	.36	.....
.....	5.40	.....	.....	5.40	.....	5.40	.....
.....	67.93	.....	.....	67.93	.....	67.93	.....
.....	94.32	.....	.....	94.32	.....	94.32	.....
Total buildings and grounds in and around Wash- ington.....	3,925.72	.....	.....	3,925.72	.....	3,925.72	.....
<i>War Department salaries, etc.....</i>	48,824.55	.....	.....	48,824.55	7.25	48,817.30	.....
<i>Buildings and grounds in and around Washington.....</i>	3,925.72	.....	.....	3,925.72	.....	3,925.72	.....
Total War Department proper.....	52,750.27	.....	.....	52,750.27	7.25	52,743.02	.....

END

PUBLIC WORKS.								
Military parks, etc.								
	Park.....	1,117.94				1,117.94	828.00	289.94
		2,105.75				3,164.75	3,166.76	
		201.38				201.38	.93	201.40
	ark.....	356.35				356.35	356.35	
	y of Battle of	1,153.43				1,153.43		1,153.43
		5,905.85				5,905.85	4,352.08	1,643.77
Total military parks, etc.								
Monuments.								
Engineer Department:								
Unveiling statue of Commodore John Barry.....		229.26				229.26		229.26
Total monuments.....		229.26				229.26		229.26
Miscellaneous public works—Civil.								
		490.87	80.92			490.87		490.87
		571.16				571.16		571.16
		351.80				351.80		351.80
	vases of	758.44				758.44		758.44
		.38				.38		.38
Total miscellaneous public works—Civil.....		2,171.73	.92			2,172.65		2,172.65
Summary public works—Civil.								
Military parks, etc.		5,905.85				5,905.85	4,352.08	1,643.77
Monuments.....		229.26				229.26		229.26
Miscellaneous public works—Civil.....		2,171.73	.92			2,172.65		2,172.65
Total public works—Civil.....		8,306.84	.92			8,307.76	4,352.08	4,045.68
Repayments in excess of payments.....							.92	
Actual expenditures.....							4,351.16	
MISCELLANEOUS.								
National cemeteries.								
Quartermaster Corps:								
Care, etc., of Confederate burial plats.....		144.92				144.92		144.92
National cemeteries.....		3,073.19	971.80			4,044.99		4,044.99
Pay of superintendents of national cemeteries.....		541.81				541.81		541.81

Statement of balances of appropriations made by Congress for the use of the War Department for the fiscal year ending June 30, 1914, showing the amounts drawn by requisition upon the Treasury during the fiscal year ending June 30, 1916, in settlement of outstanding liabilities created during the fiscal year 1914 and the amounts covered into the surplus fund of the Treasury by operation of law (18 Stat., 110)—Continued.

Title of appropriation.	Balances July 1, 1915	Appropriated July 1, 1915, to June 30, 1916.	Repayments July 1, 1915, to June 30, 1916.	Aggregate available.	Payments July 1, 1915, to June 30, 1916.	Carried to surplus fund June 30, 1916.	Balances June 30, 1916.
CIVIL ESTABLISHMENT—Continued.							
MACULANAEUS—Continued.							
National cemeteries—Continued.							
Army Hospital,	\$776.61		\$1,000.00	\$1,876.58		\$1,876.58	
	1,000.00			1,016.37		1,016.37	
	20.00			20.00		20.00	
	2,344.75			2,344.75		2,344.75	
	127.45			127.45		127.45	
	1,007.68			1,007.68		1,007.68	
re, and civil	19,763.56		1,332.27	21,095.83		21,095.83	
	28,839.97		3,419.41	32,259.38		32,259.38	
Total national cemeteries.....							
Support of national homes.							
Volunteer							
ars.....	310,391.02			310,391.02	\$667.93	309,723.04	
r Soldiers,	15,799.53			15,799.53		15,799.53	
lders and	101,000.67			101,000.67		101,000.67	
saunters.....	427,191.23			427,191.23	967.93	426,223.24	
Total support of national homes.....							
Miscellaneous objects.							
Medical Department:							
Artificial limbs.....	11,046.70			11,046.70		11,046.70	
Appliances for disabled soldiers.....	1,000.01			1,000.01		1,000.01	
Trusses for disabled soldiers.....	1,997.58			1,997.58		1,997.58	
Quartermaster Corps:							
Transporting and caring for interned Mexican soldiers							
and military refugees.....			24,000.30	24,000.30	15,916.41	8,779.79	

Statement of balances of appropriations made by Congress for the use of the War Department for the fiscal year ending June 30, 1914, showing the amounts drawn by requisition upon the Treasury during the fiscal year ending June 30, 1916, in settlement of outstanding liabilities created during the fiscal year 1914 and the amounts covered into the surplus fund of the Treasury by operation of law (18 Stat., 110)—Continued.

Title of appropriation.	Balances July 1, 1915.	Appropriated July 1, 1915, to June 30, 1916.	Repayments July 1, 1915, to June 30, 1916.	Aggregate available.	Payments July 1, 1915, to June 30, 1916.	Carried to surplus fund June 30, 1916.	Balances June 30, 1916.
MILITARY ESTABLISHMENT—Continued.							
<i>Summary, Military Establishment.</i>							
Support of the Army.....	\$1,633,435.65	.....	\$124,435.42	\$1,757,871.07	.....	\$1,757,870.57	\$0.50
Military Academy.....	23,447.15	.....	99.67	23,546.82	.....	23,546.82	.....
Organized Militia.....	898.41	\$7,220.60	.....	8,117.01	\$7,220.60	896.41	.....
Arsenals.....	682.55	.....	.....	682.55	273.44	409.11	.....
Military posts, etc.....	46.08	.....	.....	46.08	.....	46.08	.....
Miscellaneous.....	.24	.....	.....	.24	.....	.24	.....
Total Military Establishment.....	1,658,508.08	7,220.60	124,535.09	1,790,263.77	7,494.04	1,782,769.23	.50
Less payments.....	.....	.....	7,494.04	.....	.....	.....	.....
Repayments in excess of payments.....	.....	.....	117,041.05	.....	.....	.....	.....
RIVERS AND HARBORS.							
Engineer Department:							
Removing obstructions in Mississippi, Atchafalaya and Old Rivers.....	57.11	.....	.....	57.11	.....	57.11	.....
Gauging water of the Mississippi River and its tributaries	1,141.14	.....	.....	1,141.14	.....	1,141.14	.....
Operating snag boats on the Ohio River.....	10,301.46	.....	.....	10,301.46	.....	10,301.46	.....
Total rivers and harbors.....	11,499.71	.....	.....	11,499.71	.....	11,499.71	.....
RECAPITULATION.							
Civil Establishment.....	534,034.06	.....	22,789.22	556,823.28	15,916.41	540,906.87	.....
Military Establishment.....	1,658,508.08	7,220.60	117,041.05	1,782,769.73	.....	1,782,769.23	.50
Rivers and Harbors.....	11,499.71	.....	.....	11,499.71	.....	11,499.71	.....
Total.....	2,204,041.85	7,220.60	139,830.27	2,351,092.72	15,916.41	2,335,175.81	.50

TABLE 5.

Statement of appropriations made by Congress for the use of the War Department for the fiscal year ending June 30, 1913, and prior years, showing the amounts paid out of the Treasury by requisition or Treasury settlement during the fiscal year ending June 30, 1916, the amounts covered into the surplus fund of the Treasury by operation of law (18 Stat., 110), and the balances remaining in the Treasury on June 30, 1916.

Title of appropriation.	Balances July 1, 1914.	Appropriated July 1, 1915, to June 30, 1916.	Repayments July 1, 1915, to June 30, 1916.	Aggregate available.	Payments July 1, 1915, to June 30, 1916.	Carried to surplus fund June 30, 1916.	Balances June 30, 1916.
CIVIL ESTABLISHMENT.							
War Department salaries, etc.							
Secretary's office: Salaries—							
Adjutant General's Office, certified claims.....		\$6.67		\$6.67	\$6.67		
Total War Department salaries, etc.....		6.67		6.67	6.67		
Total War Department proper.....		6.67		6.67	6.67		
MISCELLANEOUS.							
National cemeteries.							
Men, certified claims.....		73.79		73.79	73.79		
Certified claims.....			\$4,195.86	4,195.86		\$4,195.86	
Officers, soldiers, and civil		46.00		46.00	46.00		
.....		46.02		46.02	46.02		
.....			1,249.73	1,249.73		1,249.73	
Total national cemeteries.....		164.81	5,445.59	5,610.40	164.81	5,445.59	
Less payments.....			164.81				
Repayments in excess of payments.....			5,280.73				
Support of National Homes.							
Volunteer							
re—							
.....		6.00		6.00	6.00		
.....		8.53		8.53	8.53		
.....		1.06		1.06	1.06		
Total support of national homes.....		15.63		15.63	15.63		

Statement of appropriations made by Congress for the use of the War Department for the fiscal year ending June 30, 1913, and prior years, showing the amounts paid out of the Treasury by requisition or Treasury settlement during the fiscal year ending June 30, 1916, the amounts covered into the surplus fund of the Treasury by operation of law (18 Stat., 110), and the balances remaining in the Treasury on June 30, 1916—Continued.

Title of appropriation.	Balances July 1, 1915.	Appropriated July 1, 1915, to June 30, 1916.	Repayments July 1, 1915, to June 30, 1916.	Aggregate available.	Payments July 1, 1915, to June 30, 1916.	Carried to surplus fund June 30, 1916.	Balances June 30, 1916.
CIVIL ESTABLISHMENT—Continued.							
Miscellaneous—Continued.							
Summary, miscellaneous.							
National cemeteries.....		\$164.81	\$5,280.78	\$5,445.59		\$5,445.59	
Support of national homes.....		15.63		15.63	\$15.63		
Total miscellaneous.....		180.44	5,280.78	5,461.22	15.63	5,445.59	
Less payments.....			15.63				
Repayments in excess of payments.....			5,265.15				
Summary, civil establishment.							
War Department proper.....		6.67		6.67	6.67		
Miscellaneous.....		180.44	5,265.15	5,445.59		5,445.59	
Total civil establishment.....		187.11	5,265.15	5,452.26	6.67	5,445.59	
Less payments.....			6.67				
Repayments in excess of payments.....			5,258.48				
MILITARY ESTABLISHMENT							
Support of the Army.							
Chief Signal Officer:		1.50		1.50	1.50		
Signal service of the Army, certified claims.....							
Quartermaster Corps:							
Pay, etc., of the Army—	\$1,149.76	125,246.43		126,396.19	125,117.54		\$1,278.65
Certified claims.....				5.53		5.53	
1871 and prior years.....			5.53	5.00		5.00	
1893.....			26.04	26.04		26.04	
1903.....			41.62	41.62		41.62	
1904.....			117.93	117.93		117.93	
1905.....			96.75	96.75		96.75	
1906.....			30.97	30.97		30.97	
1907.....							

Statement of appropriations made by Congress for the use of the War Department for the fiscal year ending June 30, 1913, and prior years, showing the amounts paid out of the Treasury by requisition or Treasury settlement during the fiscal year ending June 30, 1916, the amounts covered into the surplus fund of the Treasury by operation of law (18 Stat., 110), and the balances remaining in the Treasury on June 30, 1916—Continued.

Title of appropriation.	Balances July 1, 1915.	Appropriated July 1, 1915, to June 30, 1916.	Repayments July 1, 1915, to June 30, 1916.	Aggregate available.	Payments July 1, 1915, to June 30, 1916.	Carried to surplus fund June 30, 1916.	Balances June 30, 1916.
MILITARY ESTABLISHMENT—Continued.							
<i>Support of the Army—Continued.</i>							
Quartermaster Corps—Continued.							
Water and sewers at military posts—							
1912.....			\$12.00	\$12.00		\$12.00	
1913.....			5,157.53	5,157.53		5,157.53	
Clothing, and camp and garrison equipage—							
1900.....			7.40	7.40		7.40	
1909.....			7.93	7.93		7.93	
1911.....			24.16	24.16		24.16	
1912.....			7.41	7.41		7.41	
1913.....			285.72	285.72		285.72	
Construction and repair of hospitals—							
1912.....			18.94	18.94		18.94	
1913.....			3,837.28	3,837.28		3,837.28	
Maintenance, Army War College, 1913.....			35.55	35.55		35.55	
Medical Department:							
Medical and hospital department—							
Certified claims.....		\$13.60		13.60	\$13.60		
1900.....			47.90	47.90		47.90	
Id claims.....		129.83		129.83	129.83		
stores and supplies, 1871 and			4.50	4.50		4.50	
Total support of the Army.....	\$5,121.92	154,144.59	218,162.34	380,428.84	153,969.34	218,208.69	\$8,760.81
Less payments.....			153,969.34				
Repayments in excess of payments.....			64,193.00				
<i>Military Academy.</i>							
Pay of Military Academy, 1913.....			348.60	348.60		348.60	
Total Military Academy.....			348.60	348.60		348.60	

*Organized Militia.**Encampment and maneuvers, Organized Militia:*

<i>claims</i>	1,196.92	78.32	1,196.92	1,196.92	78.32	1,196.92	8,250.81
<i>of Coast Artillery armories, Organized Militia,</i>		456.36	456.36	456.36	456.36	456.36	
<i>Organized Militia</i>	1,196.92	529.68	1,726.60	1,726.60	529.68	529.68	
<i>in excess of payments</i>					529.68		
<i>expenditures</i>					667.24		
<i>Arsenals.</i>							
<i>partment:</i>							
<i>machine, 1912</i>.....		.00	.00	.00	.00	.00	
<i>repairs</i>.....		.00	.00	.00	.00	.00	
<i>Summary, Military Establishment.</i>							
<i>is Army</i>	8,121.92	64,193.00	228,459.50	228,459.50	218,208.69	218,208.69	8,250.81
<i>Army</i>		348.00	348.00	348.00	348.00	348.00	
<i>Militia</i>		1,196.92	1,196.92	1,196.92	667.24	629.68	
		.00	.00	.00	.00	.00	
<i>Military Establishment</i>	8,121.92	64,542.20	228,006.02	228,006.02	667.24	219,067.57	8,250.81
<i>ments in excess of payments</i>		63,874.96					
<i>RECAPITULATION.</i>							
<i>ment</i>	8,121.92	6,288.46	5,445.59	5,445.59	5,445.59	5,445.59	8,250.81
<i>ishment</i>		63,874.96	227,536.38	227,536.38		219,067.57	
	8,121.92	69,133.44	232,783.97	232,783.97		224,533.16	8,250.81

Statement of appropriations made by Congress for the use of the War Department for the fiscal year ending June 30, 1913, and prior years, showing the amounts paid out of the Treasury by requisition or Treasury settlement during the fiscal year ending June 30, 1916, the amounts covered into the surplus fund of the Treasury by operation of law (18 Stat., 110), and the balances remaining in the Treasury on June 30, 1916—Continued.

SUMMARY.

Title of appropriation.	Balances July 1, 1915.	Appropriated July 1, 1915, to June 30, 1916.	Repayments July 1, 1915, to June 30, 1916.	Aggregate available.	Payments July 1, 1915, to June 30, 1916.	Carried to surplus fund June 30, 1916.	Balances June 30, 1916.
Civil establishment:							
War Department salaries, etc.—							
Fiscal year 1916.....	\$109.39	\$1,838,008.00	.....	\$1,838,117.39	\$1,804,977.50	.....	\$33,139.89
Fiscal year 1915.....	42,010.35	.....	.....	42,010.35	4,183.03	.....	37,827.32
Fiscal year 1914.....	48,824.55	.....	.....	48,824.55	7.25	\$48,817.30	.....
Fiscal year 1913 and prior years.....	.....	6.67	.....	6.67	6.67	.....	.....
Total War Department salaries, etc.....	90,944.29	1,838,014.67	.....	1,928,958.96	1,809,174.45	48,817.30	70,967.21
Buildings and grounds in and around Washington—							
Fiscal year 1916.....	.....	402,080.00	.....	402,080.00	398,589.31	.....	3,490.69
Fiscal year 1915.....	16,203.60	.....	.....	16,203.60	10,211.80	.....	5,991.80
Fiscal year 1914.....	3,925.72	.....	.....	3,925.72	.....	3,925.72	.....
Total buildings and grounds in and around Wash- ington.....	20,129.32	402,080.00	.....	422,209.32	408,801.11	3,925.72	9,482.49
Total War Department proper.....	111,073.61	2,240,094.67	.....	2,351,168.28	2,217,975.56	52,743.02	80,449.70
Military parks, etc.—							
Fiscal year 1916.....	262,058.21	162,060.00	.....	424,118.21	388,769.77	.....	35,348.44
Fiscal year 1915.....	9,795.36	.....	.....	9,795.36	6,553.03	.....	3,242.33
Fiscal year 1914.....	5,995.85	.....	.....	5,995.85	4,352.08	1,643.77	.....
Total military parks, etc.....	277,842.42	162,060.00	.....	439,909.42	399,674.88	1,643.77	38,590.77
Monuments—							
Fiscal year 1916.....	330,031.60	5,000.00	.....	335,031.60	45,475.00	.....	289,556.60
Fiscal year 1915.....	5,000.00	.....	.....	5,000.00	5,000.00	.....	.....
Fiscal year 1914.....	229.26	.....	.....	229.26	.....	229.26	.....
Total monuments.....	335,260.86	5,000.00	.....	340,260.86	{ 5,000.00 45,475.00	229.26	289,556.60

[illegible]

Statement of appropriations made by Congress for the use of the War Department for the fiscal year ending June 30, 1913, and prior years, showing the amounts paid out of the Treasury by requisition or Treasury settlement during the fiscal year ending June 30, 1916, the amounts covered into the surplus fund of the Treasury by operation of law (18 Stat., 110), and the balances remaining in the Treasury on June 30, 1916—Continued.

SUMMARY—Continued.

Title of appropriation.	Balances July 1, 1915.	Appropriated July 1, 1915, to June 30, 1916.	Repayments July 1, 1915, to June 30, 1916.	Aggregate available.	Payments July 1, 1915, to June 30, 1916.	Carried to surplus fund June 30, 1916.	Balances June 30, 1916.
Military Establishment:							
Support of the Army—							
Fiscal year 1916.....	\$1,317,444.68	{ 2,274,203.59		\$108,642,417.39	\$104,116,135.35		\$4,526,282.04
		{ 105,050,769.12					
Fiscal year 1915.....	4,897,861.05	1,199,772.62		6,097,633.67	{ 2,274,203.59		1,192,767.79
					{ 2,630,662.29		
Fiscal year 1914.....	1,633,435.65		\$124,435.42	1,757,871.07		\$1,757,970.57	.50
			64,193.00	226,459.50		218,208.69	8,250.81
Fiscal year 1913 and prior years.....	8,121.92	154,144.58					
Total support of the Army.....	7,856,863.30	{ 2,274,203.59	188,628.12	116,724,381.63	{ 2,274,203.59	1,976,079.26	5,727,301.14
		{ 106,404,686.32			{ 106,746,797.64		
Repayments in excess of payments.....					188,628.42		
Actual expenditures.....					106,558,169.22		
Military Academy—							
Fiscal year 1916.....	14,000.00	1,052,113.37		1,066,113.37	1,042,038.68		24,074.69
Fiscal year 1915.....	14,843.77		6,771.22	21,614.99			21,614.99
Fiscal year 1914.....	23,447.15		99.67	23,546.82		23,546.82	
			348.60	348.60		348.60	
Fiscal year 1913 and prior years.....							
Total Military Academy.....	52,290.92	1,052,113.37	7,219.49	1,111,623.78	1,042,038.68	23,895.42	45,689.68
Repayments in excess of payments.....					7,219.49		
Actual expenditures.....					1,034,819.19		
Organized Militia—							
Fiscal year 1916.....	8,676,577.24	4,045,664.67		12,722,241.91	8,099,779.44	10,766.82	4,611,695.65
Fiscal year 1915.....	70,272.70	380,778.46		451,051.16	429,002.31		22,048.85
Fiscal year 1914.....	866.41	7,220.60		8,117.01	7,220.60	866.41	
		1,196.92		1,196.92	667.24	529.68	
Fiscal year 1913 and prior years.....							
Total Organized Militia.....	8,747,746.35	4,434,860.65		13,182,607.00	8,536,669.59	12,192.91	4,633,744.50
Fortifications, fiscal year 1916.....	10,633,350.18	131,008.09		10,764,358.27	4,784,728.85	24,221.92	6,005,407.50

Arsenals—									
Fiscal year 1916.....	28,857.48	{ 62,806.08				745,263.56	647,616.34	434.63	97,212.59
Fiscal year 1915.....	147,546.93	{ 653,600.00				147,546.93	62,806.08		1,088.00
Fiscal year 1914.....	682.55					682.55	83,652.85		
Fiscal year 1913 and prior years.....						.60	273.44	409.11	
								.60	
Total arsenals.....	177,086.96	{ 62,806.08				893,493.64	62,806.08	844.34	98,300.59
Repayments in excess of payments.....		{ 653,600.00					731,542.63		
Actual expenditures.....							.60		
							731,542.03		
Military posts—									
Fiscal year 1916.....	678,134.46	555,424.99					788,595.39		444,964.06
Fiscal year 1915.....						379.59			379.59
Fiscal year 1914.....	46.08					46.08		46.08	
Total military posts.....	678,180.54	555,424.99				379.59	788,595.39	46.08	445,343.65
Repayments in excess of payments.....							379.59		
Actual expenditures.....									
							788,215.80		
Miscellaneous—									
Fiscal year 1916.....	2,202.38	7,500.00					7,463.46		2,238.92
Fiscal year 1915.....	350.00						287.44		62.56
Fiscal year 1914.....	.24					.24		.24	
Total miscellaneous.....	2,552.62	7,500.00				10,052.62	7,750.90	.24	2,301.48
Total Military Establishment.....	28,148,070.87	113,239,193.42				141,387,264.29	122,391,895.58	2,037,280.17	16,958,088.54
Rivers and harbors:									
Fiscal year 1916.....	31,260,385.29	27,544,880.45					31,838,629.39	1,089,361.64	26,877,274.71
Fiscal year 1915.....	2,889.39					1,497.49			4,386.88
Fiscal year 1914.....	11,499.71					11,499.71		11,499.71	
Total rivers and harbors.....	31,274,774.39	27,544,880.45				1,497.49	31,838,629.39	1,100,861.35	26,881,661.59
Repayments in excess of payments.....							1,497.49		
Actual expenditures.....									
							31,837,131.90		
RECAPITULATION.									
Civil establishment.....	3,922,065.49	8,590,177.55				12,512,233.04	10,108,416.35	548,067.87	1,855,758.82
Military Establishment.....	28,148,070.87	113,239,193.42				141,387,264.29	122,391,895.58	2,037,280.17	16,958,088.54
Rivers and harbors.....	31,274,774.39	27,544,880.45				58,819,654.84	31,837,131.90	1,100,861.35	26,881,661.59
Total.....	63,344,900.75	149,374,251.42				212,719,152.17	164,337,443.83	3,686,199.39	44,695,508.95

NOTE.—Figures shown in boldface type represent amounts transferred between appropriations and therefore neither appropriations nor expenditures.

REPORT OF THE CHIEF OF STAFF.

REPORT OF THE CHIEF OF STAFF.

WAR DEPARTMENT,
OFFICE OF THE CHIEF OF STAFF,
Washington, September 30, 1916.

SIR: I have the honor to submit my annual report.

MILITARY POLICY.

In compliance with instructions of the Secretary of War, the War College Division of the General Staff Corps prepared a Statement of a Proper Military Policy for the United States, which was submitted to the Secretary of War, September, 1915. This Statement of Policy was published as a separate appendix to the last annual report of the Secretary of War, and as, in a very large measure, it furnished the basis for discussion of as well as the basis for the legislation passed during the past session of Congress, I have included it for convenience of reference as an appendix to this report.

The General Staff in this policy report stated the military problem before the country in the following language:

From what has been stated, we are forced to the conclusion that we must be prepared to resist a combined land and sea operation of formidable strength. Our principal coast cities and important harbors have already been protected by harbor defenses, which, by passive method alone, can deny to an enemy the use of these localities as bases for such expeditions.

The enemy being unable to gain a foothold in any of these fortified areas by direct naval attack will therefore be forced to find some suitable place on the coast from which land operations can be conducted both against the important coast cities and the rich commercial centers in the interior. Long stretches of coast line between the fortified places lie open to the enemy. The only reasonable way in which these localities can be defended is by providing a mobile land force of sufficient strength, so located that it may be thrown in at threatened points at the proper time.

It has just been shown what the strength of these expeditions might be, as well as the time required for any one of them to develop its whole effective force. Hence, it can be seen, when we take into consideration the possible two months' delay provided by the Navy, that our system should be able to furnish 500,000 trained and organized mobile troops at the outbreak of the war and to have at least 500,000 more available within 90 days thereafter. Here, however, it must be pointed out that two expeditions alone will provide a force large enough to cope with our 1,000,000 mobile troops, and consequently we must, at the outbreak of hostilities, provide the system to raise and train, in addition, at least 500,000 troops to replace the losses and wastage in personnel incident to war. To provide this organized land force is the military problem before us for solution.

This report was based upon the actual needs of the country, as they existed at that time, leaving to Congress the ways and means to provide the men. The first 500,000 mentioned was to be composed of the Regular Army and its reserve, the reserve to be produced by a term of enlistment of eight years, two with the colors and six with the

reserve. The second 500,000 mentioned above was to be composed of citizen soldiers, to be given nine months' military training in time of peace and three months' additional training on or before the outbreak of war before they would be prepared for war service.

The General Staff prepared a plan of organization for the first 500,000 which called for 7 infantry divisions of 9 regiments each, and 2 cavalry divisions of 9 regiments each, with necessary field artillery, engineer and signal troops to complete the divisions. In addition, there was to be provided a total of 263 companies of coast artillery. The total number of units recommended by the General Staff for the active army being:

- 65 regiments of infantry,
- 25 regiments of cavalry,
- 21 regiments of field artillery,
- 263 companies of coast artillery,
- 7 regiments of engineers,
- 2 mounted battallions of engineers,
- 11½ signal corps battallions,
- 8 aero squadrons,

being an increase in the Regular Army of

- 34 regiments of infantry,
- 10 regiments of cavalry,
- 15 regiments of field artillery,
- 93 companies of coast artillery,
- 5 regiments of engineers,
- 2 battallions of mounted engineers,
- 169 officers and 2,115 men in the Signal Corps, and necessary increase in the staff corps.

Congress accepted the recommendation of the General Staff in regard to the number of organizations, but at practically two-thirds of the strength recommended.

The peace strength of the Regular Army after July 1, 1920, including 45,177 noncombatant troops, will be 11,327 officers and 208,338 men, and a war strength of 11,942 officers and 287,846 men. The increase, as recommended by the General Staff, is to take place in 5 annual increments. When the increase is completed and the necessary oversea garrisons provided, there will be left in the United States just sufficient troops to organize 4 infantry divisions and 2 cavalry divisions, with necessary auxiliary troops.

The recommendation of the General Staff that a citizen volunteer army of 500,000 men, with a minimum of nine months' training in time of peace, be created was not accepted by Congress. This recommendation was attacked on various grounds as being radical, unnecessary, and impracticable, and as being particularly aimed at the Organized Militia, which the General Staff recommended be maintained as it existed at the date of the report. In the policy report, the General Staff summarized the limitations of the Organized Militia in the following language:

It is stated later in this report that 12 months, at 150 hours per month, "is considered the minimum length of time of actual training considered necessary to prepare troops for war service." Due to constitutional limitations, Congress has not the power to fix and require such an amount of training for the Organized Militia. No force can be considered a portion of our first line whose control and training is so little subject to Federal authority in peace. No force should be considered a portion of our first line in war unless it be maintained fully organized and equipped in peace at practically war strength. This would

exclude the Organized Militia from consideration for service in the first line *mainly because of the impossibility of giving it in peace the training required for such function.*

In the consideration of this question, the constitutional limitations regarding the militia occupied most of the attention of Congress to the exclusion of the standard of training necessary to prepare troops for service in the first line. Congress believed, as shown by the national defense act, that the constitutional questions that were raised were not serious enough to interfere to any extent with the transformation of the Organized Militia into a citizen force substantially in number as recommended by the General Staff, and the bill, as passed, provides that at the end of five years the National Guard will consist of about 17,000 officers and 440,000 men, the period of enlistment in the National Guard being six years, three with the colors and three with the reserve of the National Guard. A liberal provision is made in the bill for the payment.

The period of training prescribed for the National Guard is 15 days' field service, including target practice, and 48 armory drills of not less than 1½ hours, or an annual training of approximately 25 days, or 75 days in three years. This period of training is six months less than the peace training recommended by the General Staff for the citizen army, and nine months less training than necessary for war service, and, in my judgment, precludes this force from being fit for war service until it has received at least six months' additional training in time of war. I am entirely in accord with the opinion of the General Staff that troops with less than 12 months' intensive peace training can not be considered dependable troops for war service.

The debate in Congress and the discussion in the press of the country indicated that there is a very widespread, serious and vital misconception in this country in regard to the time it takes to train the individual soldier and the organization of which he is an element.

In the belief that soldiers can be very quickly trained and armies improvised, we not only run counter to the military opinion and practice of practically all the other great nations of the world, but we run counter as well to our own experience as a nation in war. The time required for the training of armies depends largely on the presence or absence of trained officers and noncommissioned officers. If there be a corps of trained officers and noncommissioned officers and a tested organization of higher units with trained leaders and staff officers, the problem of training is largely limited to the training of the private soldier. This has been satisfactorily accomplished in Europe as is being demonstrated in the present war by giving the soldiers in time of peace two years of intensive training with the colors and additional training in the reserve.

It should be obvious to any unprejudiced mind that if we are to *defeat* highly trained and splendidly disciplined armies of our possible enemies, our own forces when called upon for battle should have training and discipline at least equal to that of our opponent. While we have splendid material for soldiers, for us seriously to claim that the average American youth can be trained and disciplined in less time than the average English, French, German, or Japanese youth

argues a decided lack of understanding on the part of our people of the progress and character of the English, French, German, or Japanese people. All that we can hope for and confidently claim is that, given equal intensive training as to time, under equally favorable conditions as to officers and noncommissioned officers for instructors and leaders, our soldiers will be prepared to assure in war the success of our armies.

Under their systems of intensive training other nations require approximately 6 hours' daily work in theoretical and practical instruction of each soldier, or approximately 4,000 hours during the 2-year period of training. In our Regular service, due to the necessity of depending on volunteer enlistment, we require in 3 years approximately the same number of hours that the army in which universal and compulsory service exist obtains in 2 years.

If we continue to accept approximately 4,000 hours as our standards of training and discipline, we will meet our opponents on practically equal terms, providing that the quality of our instructors and leaders is up to their standard. If we adopt a lower standard of training, we lessen directly the fighting efficiency of our troops.

It should be clear that troops trained for 1 year of intensive training, or approximately for 2,000 hours, are only *one-half* as well trained and *less than one-half* as well disciplined as they would be if they had 4,000 hours of training in 2 years. It is obvious that troops trained for only 1 year in time of peace will have to be given additional training in time of war before they can successfully oppose troops with the high standard of training and discipline that is given in 2 years in time of peace, and that we will have to make up for any deficiency in training and discipline by decided superiority in numbers.

If we can not increase the period of training for the National Guard to the minimum laid down as essential by the General Staff, and it is very doubtful if we will be able to do so and keep the force recruited to the maximum authorized by Congress, we are confronted by a serious situation. The difficulty that is being now experienced in obtaining recruits for the Regular Army and for the National Guard in service on the border and at their mobilization camps raises sharply the question of whether we will be able to recruit the troops authorized by Congress in the national-defense act, both Regular Army and National Guard.

It is, in my judgment, a cause for very sober consideration on the part of every citizen of the country when the fact is fully understood that the units of the National Guard and the Regular Army have not been recruited to war strength in the crisis which we have just passed through. The number of units in both organizations are relatively small and the total number of men needed to recruit them to war strength certainly not great—almost negligible, in fact, when considered in relation to the total male population in the United States of military age; that is, men between 18 and 45 years. Many of the elements which favor recruiting under a volunteer system in this country existed at the time of the call for mobilization for the militia. Among others may be enumerated:

a. The agitation for preparedness that has swept over the country, due largely to the lessons of the European war.

b. The public press of the country generally, regardless of party, had given liberal space in the news and editorial columns in favor of military preparation for months previous to the call.

c. Preparedness parades in which thousands had participated had recently been held in many of the principal cities of the country.

d. Congress had but recently, in response to public sentiment, passed a new national-defense act, which will ultimately almost double the size of our small Regular Army and almost quadruple the size of the Organized Militia.

e. In response to the same national sentiment, Congress has passed, since the National Guard was called to active service, a naval bill giving the largest naval increase in the history of the country.

These facts are mentioned to show that public interest in the Army and Navy, and the national defense generally, had been aroused to a comparatively high degree; yet, in what is considered by the Government a grave emergency the National Guard is mobilized for service on the southern frontier to protect the lives of American men, women, and children, recruiting is found so difficult that many of its organizations have not yet, over three months after the call, been raised to even minimum peace strength, and likewise the units of the Regular Army have not been recruited to the minimum peace strength authorized in the new national-defense act. Anyone at all familiar with the effort made and now being made to recruit the units of both the Regular Army and the Organized Militia will understand that the failure to obtain recruits is not due to defective methods of recruiting. In fact, every effort has been made, in many cases an actual house-to-house canvass being undertaken to obtain recruits for the militia. It can be stated, I think, without fear of contradiction, that there are very few young men in the country to-day who do not know that there is a demand for their services, both in the Organized Militia now on the border or shortly to go there and in the units of the Regular Army now on the border or in Mexico.

In view of the above facts, it would be, indeed, an exceedingly shallow thinker who could attach much blame to the personnel of either the Regular Army or the Organized Militia for failure to recruit to war strength. The failure should make the whole people to realize that the volunteer system does not and probably will not give us either the men we need for training in peace or for service in war.

In my judgment, the country will never be prepared for defense until we do as other great nations do that have large interests to guard, like Germany, Japan, and France, where everybody is ready and does perform military service in time of peace as he would pay every other tax and is willing to make sacrifices for the protection he gets and the country gets in return. The volunteer system in this country, in view of the highly organized, trained, and disciplined armies that our possible opponents possess, should be relegated to the past. There is no reason why one woman's son should go out and defend or be trained to defend another woman and her son who refuses to take training or give service. The only democratic method is for every man in his youth to become trained in order that he may render efficient service if called upon in war.

measure to a realization that we must believe in ourselves, and as the exponents of a democracy that should regenerate the political systems of the world, we must be ready to hold our place in the councils of the world, and to do this we must be physically fit, or we shall be brushed aside by the vigorous manhood of other races who sacrifice self that the nation may live.

During the months of May and June hundreds of thousands marched in so-called preparedness parades to the plaudits of on-lookers. But when the militia was called out in June to protect our border, it was with the utmost difficulty that its units were recruited to the small number required, and some were never filled. The spirit was rife to let somebody else do it. Not only is there evidence of the volunteer spirit being moribund, but the States have for years been unable to make an efficient showing with the militia, even with the generous assistance of the General Government in qualified instructors and supplies. It would seem that the self-reliance of the individual, like that of the States, had given way to dependence upon others. The fine volunteer spirit of the States militia was injured in the demand for Federal pay in time of peace. It sounded the knell of patriotic military training for individuals and commercialized the highest duty that a State can demand from its people. We have fallen away from the teaching of the Fathers, for there is no longer instilled into our people the fundamental doctrine that every man owes a military as well as a civil obligation to his Government.

A young man between 18 and 21 is at the least earning capacity of his career. It is a time of anxiety to the parent and uncertainty for the son. During these years few settle into their life's vocation. They are an expense to their parents; their average earnings will not pay for their board and clothes. They can be given military training without the slightest disruption of business. The stabilizing effect of military discipline and intensive training upon such young men would be of utmost value in forming character and thereby a foundation for their life's work. They would become an asset of incalculable value to the nation, not only in time of emergency, but in the recruitment to industrial life of the thousands returned from military pursuits improved mentally, morally, and physically by the training. The hundreds of military schools in the country are evidence of the faith of thousands of parents that their boys are better fitted for the responsibilities of life by the elementary discipline and drills therein received. The most important function of our regular establishment should be to make it a real training school for our young men, and thereby inspire them with the spirit of patriotism and sense of duty and responsibility with which each generation must be imbued if we are to continue our high mission as a nation.

I shall not attempt in this report to evolve a system to carry out so important a work. It is believed that the average parent would gladly welcome the opportunity for military training for their boys between the ages of 18 and 21. As the training would be educational, there should be no remuneration for service, but the Government should stand all the expense.

If we are to continue to compete with the wage of labor for our soldiers the cost will be enormous if we are to get the men. We hire police, we hire firemen, but there is a repugnance to the idea that

we must continue to commit ourselves to no military resource other than that of hiring citizens to accept military training and to commit our future to such inadequate defense.

The justice of, as well as the necessity for, universal training is recognized in section 79 of the national defense act, which prescribes that *in time of war*, "if for any reason there shall not be enough voluntary enlistments to keep the reserve battalions at the prescribed strength, a sufficient number of the unorganized militia shall be drafted into the service of the United States to maintain each such battalion at the proper strength." This provision is intended to keep the National Guard units that have been sent into the field at war strength and is one of the best provisions regarding the National Guard in the bill. What I am contending for is that the principle recognized as applying to time of war should apply equally to time of peace, so that all of the youth of the country who are physically qualified for military service should be given thorough military training and discipline under competent officers and noncommissioned officers, so that on the outbreak of war they will be able without much additional training to render efficient service. To send men into battle who have not been given this thorough training and discipline is not only a useless waste of our resources in men but, to anyone who understands anything of the realities of modern war, convicts the people of the country who are responsible for such proceeding of criminal neglect.

THE NATIONAL DEFENSE ACT.

In general terms it may be said that this is the first comprehensive legislation for national defense. It provides for four classes of soldiers in the United States: First, the Regular Army; second, the National Guard; third, the enlisted reserve force, all of which shall exist in time of peace; and, fourth, the Volunteer Army, which will be raised only in time of war. The peace strength of the Regular Army in 1920 is fixed at figures previously stated. The National Guard should consist of about 17,000 officers and 440,000 men. Volunteers can be called in time of war in such numbers as Congress shall authorize.

The increase in the Regular Army is to be made in five annual increments, beginning July 1, 1916, and running to July 1, 1920, although the President is authorized to make the increase more rapidly in case of emergency.

The organizations provided for the Regular Army will be divided into two classes—over-sea and home garrisons. The composition of each of the garrisons in the Philippine Islands, Hawaiian Islands, Panama, and Alaska will be as stated in that policy report and the aggregate will be about three Infantry divisions. This will leave in the United States four Infantry divisions and two Cavalry divisions.

Each Infantry division will consist of three Infantry brigades (nine regiments), one regiment of Cavalry, one brigade of Field Artillery (three regiments), one regiment of Engineers, one Field Signal battalion, one aero squadron, and the ammunition, supply, engineer and sanitary trains. Each Cavalry division will consist of three Cavalry brigades (nine regiments), one regiment of Horse Artillery, one battalion of Mounted Engineers, one Field Signal bat-

talion, one aero squadron, and ammunition, supply, engineer, and sanitary trains. After deducting the necessary troops for the overseas garrisons, the troops remaining in the United States are just sufficient to organize the divisions mentioned, giving what is termed a well-balanced military organization, because there is just enough of each arm to make a good fighting machine, and there are no extra organizations left over.

The number of general officers of the Army has been increased so as to provide the necessary general officers to command the divisions and brigades and furnish the general officers of the General Staff.

The Adjutant General's Department, the Inspector General's Department, the Judge Advocate General's Department, the Quartermaster Corps, and the Medical Department have all been materially increased to meet the increased size of the Regular Army.

The number of officers in the Corps of Engineers will also be increased and the engineer troops for infantry divisions will hereafter be organized into regiments instead of battalions as heretofore, while the mounted engineer troops for use with the cavalry divisions will be in battalion organizations.

The Ordnance Department and the Signal Corps both received material increases. The work of the Ordnance Department in the design and construction of new armament and the greatly increased importance of aviation work necessitated it.

The Medical Department was increased so as to provide 7 officers and 50 enlisted men for every 1,000 of the enlisted strength of the Regular Army and by the addition thereto of a new corps of veterinarians, which corps, together with the Dental Corps, have been given increased rank, with the accompanying pay and allowances.

The organization of Infantry and Cavalry regiments has been changed by the introduction of three new companies, i. e., the headquarters, supply, and machine-gun companies. These companies have existed as provisional experimental organizations, but the personnel had to be taken from other companies of the regiment. Each regiment of field artillery has been increased by a headquarters and a supply company. The organization of the regimental units of these three arms was worked out with great care and represents the very latest improvements known to military experts.

The Coast Artillery has been increased from 701 officers and 19,321 men to 1,201 officers and 29,469 enlisted men, exclusive of bands, on July 1, 1920, giving that corps the complement that it requires in regular officers and men for the harbor defense of the country. The remaining number of officers and men will be supplied from the National Guard.

The Porto Rico regiment has been increased from two battalions to three battalions, and will be organized as other regiments of infantry.

Hereafter officers appointed as second lieutenants in the Army will be given provisional appointments for a period of two years, during which period of probation they must demonstrate their ability and fitness. All new officers will be drawn from graduates of the United States Military Academy, from enlisted men of the Regular Army, from members of the Officers' Reserve Corps, or the National Guard, or from honor graduates of military schools, or, lastly, from civil life.

The condition of retired officers is improved, in that the time which a retired officer may serve on active duty brings to him increased pay and rank corresponding to his period of active service, and in time of war retired officers may be used as the President shall prescribe.

To provide for the regular officers necessary for duty with the National Guard, duty at the various colleges where military instruction is given, for recruiting duty, military attachés, etc., provision is made for a detached officers' list which provides 1,022 officers.

Provision has been made for the retirement of officers of the Philippine Scouts.

The enlistment contract provides for three years with the colors and four in the reserve, but an important addition is that at the end of one year's service any enlisted man within the continental limits of the United States may be discharged if he has become proficient in that time. Provision is made for paying the enlisted men in the reserve \$24 a year, and the President is authorized to utilize the personnel of any department of the Government, such as postmasters, mail carriers, etc., to keep track of reservists, and also to use the postmasters (except first class) to obtain recruits for the Army.

Enlisted men are prohibited from engaging in any civil occupations, whether for pay or otherwise, that would put them in competition with men in civil life.

An officer's reserve corps is provided which authorizes the commissioning of civilians up to and including the grade of major in the various branches of the Army. These men can be selected and trained in time of peace, and the officers so obtained should be fairly prepared for their duties. In order to assist in obtaining these reserve officers, a Reserve Officers' Training Corps is authorized which will consist of units at the various colleges, academies, and universities throughout the country where military education and training will be given which should give a personnel for the officers' reserve corps that is better equipped for the duties of an officer than any heretofore available.

In order to provide the enlisted men for the various technical staff corps and departments, an enlisted reserve corps has been authorized which will consist of men whose daily occupation in civil life specially fits them for duty in the Engineer, Signal, and Quartermaster Corps, and in the Ordnance and Medical Departments. This enlisted reserve corps should provide the railway operatives, bridge builders, chauffeurs, hospital attendants, nurses, telegraphers, etc., required for the departments and corps mentioned. It is impracticable to keep in the Regular Army the number of men of these classes that will be necessary in time of war, and it is hoped that the enlisted reserve corps will provide the deficiency.

No provision is made for a volunteer force in time of peace, but in place thereof the ideas heretofore embodied in the so-called business men's camps have been provided for, in the provisions that all expenses in connection with attendance at training camps shall be borne by the Federal Government.

The National Guard is within the limits of the Constitution federalized. The maximum number authorized is 800 for each Representative and Senator in Congress, and such number from the Territories as the President shall prescribe. It is hoped that this will give a total of about 17,000 officers and 440,000 enlisted men.

The President is authorized to organize the National Guard into brigades, divisions, and other tactical units, and to prescribe the kind of organizations that shall be maintained in the various States to insure that these brigades and divisions will be complete in all respects. Certain qualifications are required of officers of the National Guard, and although these officers will be commissioned by the governors, they can not be recognized by the Federal Government unless they fulfill the prescribed qualifications. Regular Army officers may be commissioned in the National Guard if the governors so desire. Enlistments in the National Guard will be for six years, three years with the colors and three years with the reserves, but a man may serve out his enlistment, if he so desires, instead of going into the reserve. Hereafter the enlistment contract for the National Guard will contain an oath of allegiance both to the United States and to the State, and not only enlisted men but officers must subscribe to such an oath. The President is not only authorized to call out the National Guard for the constitutional purposes but is also authorized under certain conditions to draft them into the service of the United States whether they desire to come or not, and also to draft the additional men that may be needed to keep such National Guard units at war strength, in case the National Guard Reserve is not sufficient for that purpose. Provision is made for the protection of Federal property in the hands of the National Guard.

Horses can be supplied to the mounted organizations of the National Guard, and provision is made for their care and maintenance.

The National Guard will be required to have 48 periods of armory training each year and 15 days' field training, and in case the prescribed amount of training is not undergone the President may withhold the funds appropriated for the National Guard. The Secretary of War may require such additional study on the part of the officers as he deems necessary. During periods of field training the National Guard will be paid at the same rate as the Regular Army, and for the armory training a generous rate of pay is authorized. National Guard officers and men may be sent to various service schools and will be paid during such periods. The National Guard will be subject to the laws and regulations governing the Army of the United States from the time that they are required to come into that service, and after that time there is no evading the Federal law. A uniform system of courts-martial for the National Guard is authorized, the limitations of which are fixed by law. When the National Guard is drafted into the service of the United States they will be entitled to all the rights of the existing pension laws.

To encourage target practice the Secretary of War is authorized to establish ranges and to supply rifles, ammunition, and instructors for rifle clubs in various parts of the country. The initial step in carrying out the law was made in the Army appropriation bill for the current fiscal year, which appropriated \$300,000 for the maintenance of indoor and outdoor rifle ranges for the use of all able-bodied males capable of bearing arms under reasonable regulations to be prescribed by the National Board for the Promotion of Rifle Practice, and provision is made for the appointment of a director of civilian marksmanship.

The President is authorized in time of war to exercise a sort of eminent domain over the various manufacturing plants in the country

and Government orders are given right of way over all private orders. It establishes in time of peace a board of mobilization of industries, which is authorized to investigate all privately owned plants in the country suitable for the manufacture of arms and ammunition, and the Ordnance Department is authorized to prepare in time of peace the necessary tools of special kinds that are required in the manufacture of arms, ammunition, etc.

The United States is dependent upon Chile as a source of supply for nitrates which are essential to the manufacture of ammunition. The President is authorized to investigate the best means for the production of nitrates and to establish the necessary plants to manufacture nitrates for the Government's use.

The uniform of the United States Army, Navy, or Marine Corps is given protection in that only certain authorized individuals and organizations have the right to wear the uniform or any uniform so nearly like it as to be readily mistaken therefor.

THE GENERAL STAFF CORPS.

Attention is invited to the tendency to enact laws affecting the personnel of the Army in relation to its stations and duties. Frequently these enactments are not considered at the hearings or debated on the floor of Congress, nor is the War Department given opportunity to show how the military service will be affected thereby, and it sometimes happens that such legislation has an injurious effect upon the service. In this connection attention is invited to the second paragraph of section 5, national defense act, relating to the General Staff Corps. The formation of a general staff had its inception in the blunders made by our staff departments during the Spanish War, and it was to form a supervising, informing, and coordinating staff department of the War Department. It was carefully considered and fully debated in all of its varied aspects, and the organic law stated fully its purpose. The number of officers at first detailed for the General Staff was fixed at 45 as the proper number to perform this new but most important and varied duty. In 1912 the General Staff was reduced by one general officer and eight captains. This reduction seriously interfered with the work of the General Staff, which had been steadily growing in importance, as officers grew to understand its important functions.

The European war has fully demonstrated to the world the importance of a general staff for coordinating in time of peace a comprehensive knowledge of the resources of the Nation—that is, its war power—as well as in the preparation of war plans. The work of preparing the Army, the National Guard and volunteers to carry out effectively and efficiently these plans is an involved and complex study. The collection in advance of all the information necessary for a correct understanding of every problem of national defense is an immense work. General Staff work has to do not only with preparing war plans but consideration of every policy of instruction, equipment, and supply, so as to obviate waste of public funds and secure the best possible results.

After a full and careful consideration of its various duties and responsibilities, the General Staff recommended 94 officers as the num-

ber that should compose that body. The national-defense act was passed by the Senate, fixing the number at 92. But as this measure came from conference and as enacted into law the General Staff, aside from its general officers, was increased by 18 officers, to come by increments for the next five years. It directed not more than one-half of the officers detailed in said corps shall at any time be stationed or assigned to or employed upon any duty in or near the District of Columbia, and directs a penalty upon an officer who violates this or any other provisions of the section. It is needless to say that this provision, by its reduction of the available officers for the General Staff work at the War College, has militated seriously against the work of preparing the country for any emergency of war. The law limiting the President in the number of General Staff officers he can order to duty in Washington gives us fewer officers here than at any time in the history of the organization and at the most important time of our military development. Just what end of military efficiency it was proposed to serve thereby it is impossible to conjecture. In the interest of progress in military preparedness it is recommended that all the restriction placed in the national-defense act be removed and the General Staff in number be fixed as proposed in the national-defense act as first passed by the Senate.

DETACHED SERVICE LAW.

Congress, upon its own initiative and without the recommendation of the War Department, in the appropriation bill for the Army, approved August 24, 1912, passed a law which required that commissioned officers of the line of the Army below the rank of major should not be detached unless they have been actually present for duty for at least two of the last preceding six years with a troop, battery, or company of that branch of the Army in which the officer is commissioned.

Legislation extending the provisions of the detached-service law for field officers was included in the Army appropriation bill approved April 27, 1915. The laws on the subject are most stringent, and have been very rigidly construed by the department. The law was intended to remedy by legislation the keeping of certain officers too long from duty with troops. Officers who were selected for detached service were frequently kept on such duty for unduly long periods. Having laid down a principle and a general rule for the service, with a penalty to enforce its operation, Congress made exceptions by excluding their application to the Ordnance Department; for officers below the grade of major detailed for aviation duty; for all officers detailed for duty in connection with the construction of the Panama Canal until after it shall have been formally opened; for those detailed in connection with the Alaskan Road Commission, the Alaska Railroad, Bureau of Insular Affairs; permits the re-detail of officers above the grade of major in the Staff Corps and departments. The excepting of certain officers from the restrictions of the law has been largely personal legislation, without any special benefit to the service. It has, in fact, created a distinction in detached service which has not made a favorable impression in the service generally. The detached-service law has been in effect now

for four years, which has given time to consider its results. In so far as it requires service with troops, the effect has been good, although it has increased greatly the expense of administration with the frequent changes of officers to meet its stringent requirements. It likewise occasions undue expense to the individual, especially so if the officer has a family to take with him; and the majority of our young officers are married men, with the responsibility of growing children. The provisions of the national-defense act, constituting the detached officers' list of 1,022 officers, will enormously increase this expense to the Government and to the individual on account of the greater number of officers affected, for the time available for detached service will be materially shortened.

The War Department is thoroughly imbued with the spirit of the laws on this subject. I believe it would promote very greatly the efficiency of the service, and at the same time make a material reduction in the cost of the military establishment, if these laws were now rescinded and the matter simplified by a law which would authorize an officer entering upon a detail to serve out the four years of the detail and then require him to serve two years with troops before he becomes eligible for another detail. A law to this effect, bearing equally upon all departments and upon all officers below the grade of general officer, would materially enhance the efficiency of the service and the satisfaction of the personnel.

It is believed that some such measure will not only relieve the department of much embarrassment but will give the permanency to detached details necessary for efficiency, with the proper safeguards to insure against abuse, and at the same time reduce the cost of detached service by approximately 50 per cent.

THE PERMANENT STAFF CORPS.

Our experience in the War with Spain brought the War Department face to face with the fact that few officers of the regular service had knowledge of the problems of subsistence, clothing, equipment, transportation, sanitation, the vast and complicated business of supplying and transporting an army, caring for the health and strength of the men—matters which require previous training and experience. The policy had been followed that the country relied for its main strength upon volunteers who, when called into the service, brought but little of the knowledge and experience necessary to these important functions. So, having in view the special duties to be performed by regular officers, not only in connection with their own affairs but with the militia and volunteers, the then Secretary of War (Mr. Root) urgently recommended the substitution of a system of details from the line in place of the, at that time, permanent staff and supply departments so as to provide for the training of as many officers as possible in the variety of experience which would fit them for the duties of the staff and the combined service of regulars, militia, and volunteers.

In accordance with these recommendations the act to increase the efficiency of the permanent military establishment of the United States, approved February 2, 1901, provided for the details from the

line of the Army to be made in the staff departments and corps of the War Department and no more permanent appointments to be made in those departments. Some changes have since been made so as to provide examinations and give officers advanced rank for detail in the Ordnance Department, but details continue to be made as provided by the original law in the Adjutant General's, Inspector General's, and Quartermaster General's Departments and the Signal Corps except for the Aviation Section. The workings of the law have proved satisfactory in every respect. But as the number of permanent staff officers is steadily decreasing and as the law provides that the heads of these corps must be selected from the permanent officers as long as any such remain a condition will soon arise when selections must be made from a small number and thus limit the range of selection.

Chiefs of bureau can not be removed by a Secretary of War, whereas in the interest of efficient military administration they should be as easily removed as is a chief of staff. The association of the permanent officers of the staff corps with the line is, in most cases, limited to inspections, reading of reports, etc., whereas every officer of the permanent staff should be in close touch with the sentiments and needs of the line. There would result better cooperation and increased efficiency.

I am of opinion that all the officers of the staff corps, excepting judge advocates, engineers, medical officers, and chaplains, should be transferred to the line. A number of officers equal to those transferred would have to be detailed to perform staff duties. But the total number of officers of the Army would not be increased and all officers would belong to a common body and the struggle between the line and staff brought to an end. Thereafter an officer detailed as chief of a bureau or corps of the War Department should be detailed for four years, unless sooner relieved, and upon being relieved would return to that grade and branch in which commissioned and be not eligible to redetail except in time of war or other national emergency until he shall have served therewith for two years. The law that applies to the Chief of Staff should apply to the chief of every bureau and corps of the War Department, with above exceptions only.

RESERVE OFFICERS' TRAINING CORPS.

The national defense act authorizes the establishment and maintenance at civil educational institutions of a Reserve Officers' Training Corps. The system contemplates utilizing to their fullest extent the facilities of public and private educational institutions of all types at which officers of the Army are or may be detailed as professors of military science and tactics.

In 1915 5,200 students who had completed courses of military training under the supervision of officers graduated from the college type of institution in the United States, and the total number of students who received military instruction that year under officers of the Army in the schools and colleges of all types was 32,000. There are 567 colleges in this country, with an enrollment of 170,000 male students. If all these institutions comply with the provision author-

izing the Reserve Officers' Training Corps, there will annually graduate a large number of men trained for reserve commissions. The enthusiastic approval accorded this provision by educators warrants the prediction that a large number of our colleges which now afford no military training to the student will apply to participate in its provisions. The total cost to the United States of the military training of a reserve officer should not be over \$1,000 per man. This includes service of training in the Regular Army subsequent to graduation for at least six months. There was some delay in receiving from the printing office the regulations for the Reserve Officers' Training Corps, but these are now in the hands of all educational institutions interested.

PLAN FOR MILITARY TRAINING IN PUBLIC SCHOOLS OF THE UNITED STATES.

In paragraph 6, "Statement of a Proper Military Policy for the United States," it was shown that our military system should be able to furnish at the outbreak of war 500,000 trained and organized mobile troops, and to have available not less than 500,000 more 90 days thereafter. In addition, to supply losses and wastage in war, it was considered that, after the outbreak of hostilities, the system should provide a plan for raising and training 500,000 more.

To prepare for this task requires us to use every available means of educating the young as to their future duties as citizens.

If our democracy is to endure it must "recognize as its primary standard of duty the obligation of the individual man and woman to sacrifice themselves for the whole community in time of need."

The necessary elementary instruction that every young American should have in order to be prepared when the time comes to play his part in the national defense can be partially given in the public schools. Moreover, this can be done in such a way as to enlist parental approval, because of the manifest improvement of the scholars in physique, deportment, and obedience to authority at home as well as at school.

The object of the prescribed course of instruction is to inculcate high ideals and correct views on the duties of the citizen to the State. The training given is along military lines, but is so conducted as to encourage initiative and individuality, to correct defects and develop natural gifts, and to teach self-control by showing the value of obedience to superior authority. The old method of "breaking the will" by insisting on blind, unreasoning obedience to arbitrary rules is replaced by one showing how to use the individual will in attaining the concerted effort known as "teamwork," which is the secret of efficiency, and which is dependent upon a conscious and willing obedience to a superior directing authority. Those who learn how to obey fit themselves to direct and by practicing self-control become imbued with the fundamental principle underlying good citizenship. This is not a theoretical scheme. It is a practical system carefully worked out by Capt. E. Z. Steever, United States Army, and applied with marked success in the public high schools of the State of Wyoming. It has been designated the "Wyoming plan," and its distinctive features are outlined in what follows.

The Wyoming plan.

The Wyoming school authorities hold:

1. That good citizenship involves a willingness on the part of each able-bodied youth to make such effort and sacrifice as will prepare him for his obligations and duties as a citizen.

2. That this preparation embraces the following: (a) Military preparation; (b) Moral preparation; (c) Civic preparation; (d) Business preparation; and (e) Educational preparation.

(a) *Military preparation.*—It is unsound to assume that any system of training its adolescent youth will remove from the nation the further responsibility of training its manhood.

Trained youth can not take the place of trained manhood. Youths make imitation, but not real, soldiers.

A thorough preliminary military training of its adolescent youth has been recognized in primitive as well as modern civilizations as the first step in the greater training of the tribe or nation.

With the civilized as with the primitive youth the "game" is the medium of all successful training. "Competition" is to youth what "security" is to old age.

According to the Wyoming plan all cadets are organized into competition units.

Leaders take "turnabouts" choosing the members of their units, so that each unit (squad, platoon, or company) is made up of an equal number of strong, medium, and weak lads.

After final choosing-up these units are fixed and can not be added to nor subtracted from.

All the work is done by competition units.

There are: Wall-scaling units, infantry-drill units, troop-leadership units, scholarship units, field-firing units, camp and field units.

Sponsors are elected from the girls in the mixed school and assigned to the competition units. The sponsors are in every sense members of the cadet organization. They attend all drills, are the leaders in all social functions, and while they do not actually drill the sponsors are entitled to and receive such individual rewards as may be won by their units.

Medals, ribbons, and distinctive marks on the uniform are given each member of a winning unit, the sponsor, of course, included.

Each cadet organization is based on the voluntary enlistment plan. The cadet classes are held generally during and not after school hours, and credit toward graduation is awarded therefor.

Cadet tournaments are held during the school year between the different high schools, to which the public is invited, and at which are held infantry-drill, wall-scaling, field-firing, and camp and field, and troop-leadership competition "games."

From the Wyoming experience is deduced the following system of training adapted to the adolescent American youth. Local conditions will necessarily modify the application of this system, but the general principles on which it is based will obtain in any part of the United States, and will permit the evolution of a practical course suited to local conditions:

1. Cut the school year into separate, short, intensive training periods, working up through preliminary to final competition dates, with the fixed competition units.

2. September 1 to December 31, wall-scaling and calisthenic events; minimum of drill, maximum of body building.

3. January 1 to February 28, troop-leadership competitions, 12-inch Gettysburg war-game map. Include military policy of the United States.

4. January 1 to February 28, minimum of drill, maximum of gallery practice, group competitions.

5. March 1 to May 7, minimum of drill, maximum of range practice, and field-firing competition.

6. May 8 to June 15, minimum of drill, maximum of camp and field problems, competitive between high schools.

7. All through school year, commencing in the spring and running through the following fall and winter, take boys into camp each week-end and harden them to the rigors of camp life. Teach them sanitation, cooking, woodcraft, simple field engineering, plains craft, castrametation, sketching, scouting, patrolling, the service of security and information, and qualify them as guides in their own immediate surrounding territory.

8. Summer camp immediately after closing of school, 14 days.

The organization that puts into effect the "game" idea differs fundamentally from the modern American athletic system. The cadet leaders choose up each in turn so that each fixed competition unit represents a certain proportion of strong, of medium, and of weak lads.

In football and basket ball and track events, only the *few physically fit take part*. In this system each squad represents an average and *every boy takes part*. There is as much "in it" for the weak as for the strong, and the survival of the fittest units, whether they be squads, platoons, or companies, gives the competition spirit.

(b) *Moral preparation*.—A nation stands or falls, succeeds or fails, just in proportion to the high-mindedness, cleanliness, and manliness of each succeeding generation of men.

In the Wyoming system the fundamental factor is the competition between equally balanced units. The individuals are forced by public opinion amongst their fellows to go into training, and this training means clean, moral youths. It is shown conclusively in the various competition that clean men morally are the surest kind of winners. Smoking and immoral practices must go. Under the fiercest kind of competition, and a new and fascinating interest in life, the adolescent youth is better enabled to negotiate that difficult period of life.

(c) *Civic preparation*.—It is almost a fundamental principle of correct military organization that the leader should not be voted for. The Wyoming system is not intended to make soldiers. The Wyoming schoolmasters are of the opinion that soldiers can only be made from mature manhood, and that the preparation of the adolescent youth should be such that when he reaches manhood he may then be made into the highest type of soldier. Hence the objection to voting for leaders does not obtain in the cadet organization, whereas the objection is perfectly valid in a military organization.

The cadet leaders are chosen at the beginning of each year by vote of the older cadets. The leaders are selected on merit, very much as the captain of the football team is selected for his merit. It has been noticeable that on the first organization boy politics elect a certain percentage of popular but inefficient leaders, whose very inefficiency is later a terrible punishment to the members of their own units. The stress of competition soon brings out the real leaders. The cadets never repeat their mistake. After the first election they take steps to insure a very wise and careful selection of leaders.

This civic lesson can not be wholly lost to them in years to come, when they are called upon as citizens to elect the leaders of their city, county, State, and National Governments.

(d) *Business preparation*.—Teamwork and efficiency are prime requisites in the business life of to-day.

The soldier game can be made the keenest, as well as the most fascinating, of all games, and efficiency is a necessity if a competition unit is to win. Not only must each man be worked to the limit of his capacity, but each competition unit leader must analyze his men and fit each to his proper place. The leaders are always leading and learning efficiency.

There is every reason why the "Wyoming plan" should be taken up by every high school in the country.

TRAINING CAMPS.

Over three years ago Maj. Gen. Leonard Wood, then Chief of Staff, put in operation the plan of camps of instruction for regular troops at which students were permitted to attend for training without cost to the United States. This plan was later enlarged by permitting the attendance of business men at certain of these camps. The plan has been most successful as carried on in the Eastern Department, now commanded by Gen. Wood, with a minimum of troops and few officers to call upon for this additional instruction. Camps have been maintained in the Eastern Department as follows:

Plattsburg.—Five camps were held in sequence beginning June 5 and ending October 5.

Oglethorpe.—Two camps were held beginning May 3 and ending June 30.

Fort Terry, N. Y.—One camp was held beginning July 5 and ending August 10.

Fort Wadsworth, N. Y.—Six camps of two weeks' duration each were held beginning May 28.

There was a total attendance at the various camps of 12,200 men and boys, who came from all parts of the country.

In reporting upon these camps, Gen. Wood says:

The training at these camps is intensive; the work is hard; the food good; the hours regular; the discipline extraordinarily good—there were practically no infractions of discipline. The general tone of the camp is excellent. It is difficult for one to appreciate how absolute the discipline is unless one has served in camp.

Following the Plattsburg plan, camps were also established this year in the Western Department at the Presidio of San Francisco—two camps—and one at American Lake, Wash., with a total attend-

ance of 357 students and business men. A satisfactory camp was also held at San Antonio, Tex, in the Southern Department. The plan has now received official recognition from Congress, and materially increased attendance should ensue at the camps to be held next year. Congress has appropriated money for transportation to and from training camps and for subsistence in kind while at the camps. Appropriation should be made for the issue of a proper uniform while in camp with the privilege of purchase or of turning it back at the expiration of the training period.

RECRUITING REGULAR ARMY.

Between March 15, 1916 (the date active recruiting began to meet the increase in the Army authorized by the joint resolution of Mar. 17), and August 31, 1916, the losses and enlistments were as follows:

	Enlistments.	Losses.
March 15 to 31-----	1, 635	1, 079
April -----	2, 873	2, 136
May -----	2, 275	2, 022
June-----	3, 343	1, 495
July -----	4, 354	1, 105
August-----	3, 054	1, 234
Total -----	17, 534	9, 071

This represents a gain of 8,463 during the period mentioned.

On June 30, 1916, the close of the fiscal year, there was a difference of 20,292 between the actual and authorized strengths of the Regular Army, and the increase authorized for the fiscal year beginning July 1, 1916, exceeded that authorized by the joint resolution of March 17 by 13,909, making a total difference between the actual and authorized strength on July 1, 1916, of approximately 34,200: Between June 30 and August 31 the enlistments exceeded the losses by 5,069, leaving a difference on August 31 of 29,130 between the actual and authorized strengths.

CAVALRY.

All regiments of Cavalry having permanent stations in the United States, excepting the Second, located at Fort Ethan Allen, Fort Myer, and Fort Oglethorpe, have been engaged in arduous patrol duty along the southern border or with the expeditionary force now in Mexico. The sections of the national defense act, which provide for the composition of the various units of the several arms, followed the recommendations of the General Staff, except in so far as these sections provide a minimum strength for these units. The enlisted strength of the Army under this act is limited to 175,000 combatant troops after all increments are added. In fixing the authorized enlisted strength of the Army to include the first increment, it was decided, until all organizations have minimum peace strength, there would be no increase for any unit in excess of the minimum prescribed in the national defense act, and no unit of any branch of the Army would be increased above this minimum at the expense of any other branch. The enlisted strength of Cavalry units and

especially the Cavalry troop in the squadron is now less than that needed for proper efficiency. This can only be properly remedied by legislation, which is recommended to provide but one enlisted strength, the maximum, at all times for all Cavalry units. The overhead charges for a Cavalry troop of 70 enlisted men are practically the same as for a troop of 105, both requiring the same number of officers and practically the same noncommissioned officers and barrack accommodation. Some provision should also be made for a training and remount troop in time of active service. This can be done by adding a training detachment to the headquarters troop as now authorized and organizing the training and remount troop only in time of actual field service by assigning thereto the training detachment from the headquarters troop and such officers and enlisted men for other troops as necessary to conduct the work. In maintaining Cavalry organizations on the border it has recently been necessary to send both *untrained* men and *untrained* horses directly to regiments neither at all fit for the hard work required. This has been necessary on account of the reduced strength of these organizations at the front. No trained material being available, it was necessary to fill up the organizations with the best obtainable. Such a policy is, however, a makeshift both expensive and extremely unsatisfactory in its results.

Cavalry equipment.—The model 1912 Cavalry equipment was issued by the Ordnance Department to the entire First Cavalry and to one squadron each of the Third, Fifth, Eleventh, Thirteenth, Fourteenth, and Fifteenth (transferred by the latter to the Eighth Cavalry). Owing to the many complaints received from regimental and other commanders with reference to the unsuitability of various portions of this equipment, a board of officers was convened at Rock Island Arsenal (under the provisions of par. 44, Special Orders No. 211, War Department, 1915) for the purpose of examining and reporting on the relative merits of certain military saddles for the Cavalry service, as well as of considering reports submitted with reference to the Cavalry equipment, model of 1912, and suggested changes therein. The final recommendations of this board have not (as yet) been submitted, and when received will require some months for a thorough tryout before final action. In the meantime, the manufacture and issue of the Cavalry equipment, model of 1912, has been ordered discontinued. In April the Chief of Ordnance reported the supply of Cavalry equipment available for issue, including both the model 1912 and earlier models, as rapidly reaching a point where it would be impossible to meet requests for the ordinary maintenance in the service, and that it was imperative that the manufacture of a limited amount of Cavalry equipment be undertaken at once. The reports received from commanders having the model 1912 equipment emphasized such serious defects in the enlisted men's saddle as to make it clearly inadvisable to continue the manufacture of that equipment unless the Cavalry Equipment Board at Rock Island Arsenal could find a remedy for the defects reported. This board was accordingly instructed to continue the tests of this equipment and submit report as soon as practicable. Reports received from organization commanders on the border clearly indicated that the McClellan sad-

dle was better adapted for field service than the 1912 model. This question was also submitted to the Cavalry Equipment Board at Rock Island Arsenal, which recommended the issue of the McClellan equipment, the Ordnance Department having all appliances on hand for that purpose. After due consideration this recommendation was approved and the Chief of Ordnance was instructed to renew the manufacture of the McClellan equipment in such quantities as necessary to meet current and reserve needs until otherwise ordered.

Cavalry Drill and Service Regulations.—The revision and bringing up to date of the Cavalry Drill and Service Regulations by the board of officers convened by paragraph 29, Special Orders No. 210, War Department, 1915, has been completed, and it is hoped to have these regulations very shortly issued to the service. The 1914 regulations requiring double rank as the normal formation and assuming the regiment to consist of six squadrons of two troops each, commanded by captains, were approved and issued to the Cavalry service October 22, 1914, in accordance with General Orders No. 79, War Department, which instructed each officer to submit on June 1, 1915, a report embodying his opinion and recommendations in connection therewith. These regulations have been in effect since that date. After an extensive try out which included much field service on the southern border, these reports were rendered, and upon being tabulated, it was found that about 90 per cent of the Cavalry officers favored return to single rank as the normal formation with the statutory organization of troop, squadron, and regiment. A large percentage of these officers likewise favored the principle of "leading" upon which the regulations of 1914 were based.

The revision now submitted by the board provides:

1. Single rank as the normal formation with the statutory organization of the various units.
2. Retention of the principle of the 1914 regulations, that mounted units are habitually led in person by their commanders.
3. Provision for double rank for use under circumstances requiring it.

The new manual treats with great detail and thoroughness the training of the recruit and remount. Detailed explanations practically terminate with the platoon, after which drill evolutions and the maneuvering of the troop, squadron, and regiment are but the application of fixed principles and methods laid down for the smaller units.

Mounted Service School.—This school graduated during the last year 28 officers in the first-year class, 7 officers in the second-year class, and 12 officers in the fall class, field officers' course. No spring class was held for field officers owing to the need of officers with troops on the southern border. Ten noncommissioned officers were graduated. Several members of the different classes failed to graduate on account of unsuitability or inaptitude. Regimental commanders of cavalry and field artillery have been instructed to give careful attention in submitting recommendations for details at the Mounted Service School, having in mind intelligence and character as well as physical skill in order that all students may not only take the various courses with credit but with a view of their afterwards

being advantageously employed as experts in the training of both men and remounts.

Now that the Mounted Service School has established beyond question its function in our scheme of military education, and its permanent location at Fort Riley determined, it is believed that a more definite policy of building construction should be approved by the department so as to provide adequately for the needs of a larger school as made necessary by the recent increase in the mounted branches of the service under the national-defense act. Heretofore the school has been more or less dependent for quarters normally required for the garrison of two regiments that are permanently stationed at Fort Riley, but which have during the past few years been on border service. With the return of these regiments additional quarters will be required for the school. In accordance with the recommendations of the Quartermaster General and the commandant, the 1918 estimates will include new construction work covering the more pressing needs of the school.

CAVALRY HORSES.

Some fear has been expressed by officers of the mounted service that shipments from this country of horses and mules abroad were reducing the available stock very materially within the country, as during the period August 1, 1914, to July 31, 1916, over 620,000 horses were exported. In addition to this, 176,000 mules were exported. The Department of Agriculture has kept very accurate statistics of the number of horses exported and definite information concerning their quality, sex, and probable usefulness. Of those shipped about 30 per cent were mares. Many of these were old, and few of the young ones showed evidence of having produced foals and would probably add nothing to the breeding value of the horse stock obtained at home. The loss in good producing mares is negligible, as the farmers prefer to keep this stock at the prices now prevailing. The foreign purchases encourage the type of horse needed for cavalry purposes, and has stimulated rather than restricted their breeding. It is probable that the suitable horses for military purposes will be increased as the farmers have disposed of inferior producers and are recruiting the remaining stock by means of better breeding methods.

The system of breeding horses for the military service conducted by the Bureau of Animal Industry, Department of Agriculture, referred to in my last report should be extended and the necessary appropriations made for that purpose. Some of the advantages of this system are:

1. The War Department will know where to find 3-year-old colts of the types desired, and result in the standardization of suitable military types.

2. Resulting foals will all be sired by sound registered stallions and be out of sound mares selected for their fitness to produce foals of the cavalry or artillery type.

3. Unsound and unregistered stallions will eventually be eliminated.

HORSES AND MULES BOUGHT.

As no appropriation had been made for supplying militia troops with animals prior to calling these organizations into field service on June 18, immediate steps were taken to secure the animals needed to equip these troops. Remount stations and purchasing officers advertised for them as extensively as possible. Bids were opened June 26, and contracts awarded June 27, for 42,408 horses and 18,440 mules. Inspection agents at the points of delivery inspected and shipped the animals to the auxiliary remount depots at El Paso and Fort Sam Houston, Tex., where they were held until free from shipping fever, which is prevalent among animals required to undergo railway journey. This quarantine covers a period of about two weeks. Animals issued to troops before they fully recover from this ailment would infect the other animals. Each organization was given a partial supply before attempting to complete the allowance to any one organization. This enabled each unit to be partially equipped until other additional remounts were received.

The following table shows the horses and mules received and issued from the auxiliary remount depots and other points on the Texas border:

	Received.		Issued.	
	Horses.	Mules.	Horses.	Mules.
Auxiliary remount depot, El Paso, Tex.:				
Week ended—				
July 8.....	851	23	68	.....
July 15.....	1,092	235	345	151
July 22.....	2,703	702	429	331
July 29.....	2,822	1,853	1,160	829
Aug. 5.....	2,239	1,037	2,857	1,240
Aug. 12.....	1,712	1,809	792	702
Aug. 19.....	1,399	448	1,986	857
Total.....	12,313	6,107	7,657	4,110
Auxiliary remount depot, Fort Sam Houston, Tex.:				
Week ended—				
July 8.....	1,652	1,620	878	235
July 15.....	2,161	2,055	479	176
July 22.....	1,093	2,137	1,997	1,036
July 29.....	1,831	1,415	1,069	1,831
Aug. 5.....	1,588	1,421	1,693	1,423
Aug. 12.....	1,814	1,191	766	910
Aug. 19.....	863	620	969	895
Total.....	10,702	10,495	7,851	6,516
Shipped to various posts on the border (Brownsville, Harlingen, Eagle Pass, Laredo, McAllen, Calerico) and issued to troops when released from quarantine.....				
	2,787	633	2,787	633
Grand total, shipped and issued.....	25,807	17,199	18,295	11,269

FIELD ARTILLERY.

The report of a board of officers convened to make recommendations concerning types of field guns and ammunition supply therefor, as finally approved by the Secretary of War, was based on the necessary equipment for a force of 1,000,000 men organized into 15 Army corps and 4 Cavalry divisions.

Advantage was taken of knowledge and experience gained from reports and observations abroad and in the light of most recent developments in the manufacture and efficiency of the different types of guns, kind of ammunition, means of transportation, improved equipment for fire control in making its study and report, and types of guns have been adopted which conform to the requirements of modern war.

The computation as to the number of guns required is based on an allowance of 4.9 guns to a thousand gross Infantry and Cavalry, instead of 3.1 guns, as formerly.

The full accumulated ammunition allowance is provided for overseas stations and one-half the amount for home stations.

Motor tractors and trucks are provided for the heavier types, and provision is made for all signal equipment, including aeroplanes, necessary to render effective the Field Artillery material.

Under the national-defense act the number of Field Artillery regiments will be increased by 15—3 to be organized each year for five years. The new regiments for this year were organized from a nucleus of trained personnel drawn from old regiments.

The unusual demands during the past year made it necessary to abandon the regular courses of instruction at the School of Fire for Field Artillery. It is contemplated to reopen the school for the regular spring courses and with a more extended program of instruction. The increased ammunition allowance authorized by Congress this year for target practice will insure increased efficiency in fire for effect.

Modern types of observation balloons and heavier-than-air flying machines for use in training and fire control at the School of Fire have been authorized.

The question of the advisability of utilizing motor traction and transport for heavy field artillery has been under trial and experiment for sufficient time to demonstrate its efficiency and economy with the heavier material, and further experience and test will enable more accurate conclusions to be drawn.

It is a matter of satisfaction to cite the interest shown by the National Guard in Field Artillery work and the number of batteries that have been organized. A complete battalion of field artillery was enlisted from students at Yale University, and their progress and interest in the work at the training camp at Tobyhanna, Pa., under a corps of instructors from the Regular Army is worthy of special praise and comment.

The lack of sufficient regular field artillery to meet the demands made on this arm has been emphasized during the past year. It has been impossible to provide sufficient officers for duty as inspector-instructors of the National Guard and for other purposes, and no regular organizations could be made available for the field training of the militia. As a result of the mobilization on the Mexican border it became necessary to discontinue the School of Fire for Field Artillery and thus deprive, not only the regular personnel but also a large class of officers and noncommissioned officers of the National Guard of the advantages afforded by this school.

The armory training of the Field Artillery of the National Guard has shown a marked improvement over previous years. While only 185 gunners were qualified in 1915, the reports for 1916 show 1,560

qualified gunners, nearly one-third of whom were in the expert first-class grade. The instruction of National Guard officers has not progressed as satisfactorily as that of the enlisted men, and the number who qualified for certificates of proficiency has not been up to expectations.

Only one battery of the National Guard Field Artillery was able to attend a camp for field training and conduct target practice before the mobilization in 1916, and this was made possible because the State defrayed all expenses. An effort was made to secure sufficient appropriations from Congress to conduct camps prior to June 30, but funds could not be obtained in time for use. As a rule, such camps are not profitable unless Regular organizations can attend to furnish instructors and trained horses. The future development of the field artillery of the National Guard must depend upon the degree to which the Regular regiments can assist in their field training. For reasons of economy in transportation it will be desirable, therefore, to station the Regular regiments where they can reach the field artillery training camps by marching.

The appropriation of \$200,000 for the fiscal year 1916 to provide forage for horses and pay for helpers for the Field Artillery of the National Guard has had a beneficial effect. At the time of the mobilization the National Guard batteries had on hand 912 horses, 558 of which were purchased from Federal funds or issued by the Federal Government. These horses were distributed among 74 of the 83 National Guard batteries, thus affording a general opportunity for mounted instruction.

Mobile-artillery target practice.—The increased importance of mobile-artillery fire developed by the war in Europe has emphasized the necessity for more target practice, and Congress during the last session provided a much-needed increase in the amounts available for expenditure for this purpose, so that for next year it will be possible to provide a more adequate allowance for the proper instruction of the personnel of the Field Artillery.

COAST ARTILLERY HARBOR DEFENSE.

The national defense act, by its increments of increase, will give the Coast Artillery Corps a complete manning body for the guns and mine defenses of the over-sea fortifications, for all the mine defenses of the home fortifications, and for one-half of the gun defense.

It has been the policy of the War Department to look to the States in which harbor defenses are located to supply one-half of the personnel required for a complete manning for the gun defenses. Up to the present time the coast States have not met their obligations in supplying militia artillerymen. Up to the present time they have supplied less than 50 per cent of their quota. Steps will be taken to try and arouse great interest in this matter in the militia of the States concerned.

The increase of armament of recent battleships, by which they carry more powerful, longer range guns than those which have heretofore been installed, has exposed certain cities—harbors of anchorage—to a fire which would not be met successfully by existing fortifications. This led the Secretary of War to direct the War Depart-

ment Board of Review to revise the approved projects. This board submitted a report on November 26, 1915, covering what it considered the most pressing requirements of harbor defense. These projects will involve:

(a) The emplacement of 50-caliber 16-inch guns and 16-inch mortars.

(b) The utilization as howitzers of the surplus 12-inch guns now on hand by mounting them on barbette carriages of a special design that will permit of the attainment of a range of 30,000 yards.

(c) The initiation of the construction of movable howitzers and an experimental gun on railroad car mount, for defense against hostile landings in unfortified harbors.

(d) The provision of 3-inch antiaircraft guns for seacoast fortifications.

(e) The abandonment of certain existing seacoast armament that is deemed to be of insufficient military value to warrant incurring the cost of providing a manning personnel or ammunition therefor.

(f) The retention of the disappearing carriage as the type mount for direct-fire seacoast guns, except in those instances where special conditions may render advisable the installation of the turret or barbette mount; any type of mount for direct-fire guns to be constructed in future to admit of an elevation of approximately 30 degrees and a motion in azimuth as great as the necessities of the site demand to meet an attack over water or land areas.

(g) Increases in the allowances of seacoast ammunition.

When the features of the revision proposed shall have been effected, our harbor defenses will be able successfully to meet any attack which can reasonably be expected from the sea.

In view of the confidential nature of mine-planting work and of the importance of having military control over the crews of mine planters, cable ships, tugs, launches, and other vessels employed with the armies of the United States, it is recommended that legislation be sought declaring the members of these crews "Persons subject to military law" within the meaning of Article II of the Articles of War.

The instruction of Coast Artillery has been somewhat interfered with by the necessity for the detachment of troops for service along the Mexican border, but they have all now been returned to their proper stations. Vocational training has received considerable attention and 1,919 men are reported by the Chief of Coast Artillery as having availed themselves of the opportunities to take vocational courses, which covered instruction of electricians, telephone operators, telegraph and radio operators, engineers, firemen, blacksmiths, painters, plumbers, carpenters, and also in music, map reading, sketching, etc.

In February, 1913, three administrative units called Coast Artillery districts were established, and an additional district in the Panama Canal Zone has since been added. The duties required of commanding officers of these districts are analogous to those prescribed for brigade commanders of troops. The fact that the duties are largely technical has led to the policy of appointing to the command of these districts Coast Artillery officers who have been appointed general officers of the Army. Legislation which fixed the number of brigadier generals of the Army did not take into consideration these

assignments, but was based upon the necessities of the mobile troops. It is as desirable to have brigadier generals with Coast Artillery training command these Coast Artillery districts as it is unsuitable to use them in command of mobile troops.

It is therefore recommended that the Coast Artillery Corps be increased by brigadier generals to command Coast Artillery districts, the number to be the proportion due the Coast Artillery as a part of the line of the Army, to be filled by the transfer of such general officers of the line who, under past policy, have been appointed from the Coast Artillery, and thereafter appointment of general officers for that corps be made entirely within that corps and none to the line of the Army. These brigadier generals, with the Chief of Coast Artillery, would give the Coast Artillery Corps a proper proportion of general officer appointments.

Ammunition for harbor defenses.—A step has been taken toward securing the full effectiveness of harbor-defense armament by increasing the allowance of reserve ammunition for guns to that corresponding to the accuracy life for one-half the guns mounted in the continental United States and for all the guns mounted in the insular possessions and the Canal Zone. The allowance for mortars has also been materially increased. This proposed increase in the allowances has been met by increased appropriations by Congress, and it is hoped that during the next three years the total allowance will be provided for.

SHORTAGE IN ORDNANCE MATÉRIEL.

The most serious shortage of matériel for preparations for war is that of field and siege artillery, its ammunition, and machine guns. With reference to field and siege artillery and its ammunition, the project therefor in existence since 1911 and known as the Greble Board standards, has been replaced by that known as the Treat Board standards, in which provision has been made not only for a larger number of guns for the men employed, but also for a materially greater allowance of ammunition per gun. While Congress at its recent session made markedly greater appropriations for this class of matériel than in the past, larger appropriations must be made if this project is to be provided for in the next seven years as contemplated.

The large orders placed in this country for foreign Governments have developed a large capacity for ordnance matériel, especially mobile artillery ammunition, of which class the greatest quantities will be required in time of war, but this capacity is far in excess of the peace requirements of the United States, and a large portion must, therefore, inevitably disappear. Every effort will be made to utilize to the best advantage the provisions in recent appropriation acts for developing private capacity for the manufacture of ordnance matériel of service design, but the funds available for this are too limited to permit of any marked progress being made.

A part of the improvement that might otherwise be obtained is lost, due to restrictive legislation as to the capacity at which the arsenals shall be operated and as to procurement by purchase. The extent to which special plants can be continued in existence after

the European demand ceases, is directly dependent upon the orders that can be given them.

It is therefore recommended that effort be made to increase the appropriations for armament, to continue the provisions of law which aim to retain commercial capacity for production of war matériel, and to remove the restrictions which will result in reduction of this capacity.

In this connection I desire to invite attention to the following extract from my report of last year:

The history of war will show, almost without exception, that each great conflict has resulted in the introduction of new and powerful weapons and devices for attack and defense. Initial advantages of immense import have been gained by a belligerent who has developed some new innovation against which no immediate defense was adequate. The innovation of yesterday becomes the necessity of to-morrow. The present gigantic conflict waging in Europe is too near in perspective and too obscure in detail to grasp as yet all its manifold lessons, but one of the great outstanding features is the use of large-calibered mobile artillery. Each and all of our observers have been struck with the gigantic results attained by its use, and each and every one emphasizes the necessity of our immediate development along similar lines. In this view I am in thorough accord and earnestly recommend that the necessary steps be taken to this end.

Mobile guns of at least 12-inch caliber mounted on railway carriages or dragged by suitable motors are especially needed for transportation up and down our coast lines to protect our undefended harbors and prevent hostile ships from putting landing parties ashore anywhere on our coast outside of the range of the guns of our coast-defense forts and assist the mobile army in defending the rear of those forts.

As a result of the hearings before Congress appropriation was made for only one mobile mortar and one mobile gun on designs prepared by the Ordnance Department. Many of our harbors are undefended by permanent fortifications. Heavy artillery of mobile type must be obtained to give proper defense to landing places and harbors which otherwise might give access to an enemy.

It is a well-known fact that the resources of England, France, Italy, and Russia were noneffective in producing war matériel required by those countries, and that the industries of other nations are now largely employed in making up this deficit.

There is danger that the procurement of war matériel by the Ordnance Department will be delayed. The fortification act, approved July 6, 1916, provides, in effect, that no purchase shall be made unless the price quoted is within 25 per cent more than the arsenal cost, or in the absence of previous arsenal manufacture, the estimated arsenal cost; except when in the opinion of the President an emergency exists affecting the general welfare. In times of fluctuating and high prices, with manufacturing plants supplied with more work than they can do, as at the present time, this provision might seriously delay the procurement of needed armament unless the President were willing to declare an emergency. The Army appropriation act, approved August 29, 1916, provides, for field artillery, that not more than \$5,000,000 out of \$10,000,000 appropriated shall be used for purchase. As the arsenal capacity on a two-shift basis is not above \$3,000,000 for this class of product and as it is very undesirable to run plants on a three-shift basis it is evident that this act alone supplies sufficient work for the arsenals for about 18 months, and it is practically obligatory that a certain amount of the funds under other acts be spent for these same purposes at the arsenals.

The Ordnance Department is using every means to expedite production of artillery. Further speeding will require faster procurement of designs and more rapid manufacture. The former can be obtained only by purchasing foreign designs the nearest to those required that can be procured and regardless of cost. Manufacture can be best hastened by invoking paragraph 120 of the national defense act, approved June 3, 1916, which provides, in effect, that in time of war, or when war is imminent, the President may empower the Ordnance Department to partially or wholly take over such manufacturing plants as may be needed and cause them to be operated in the production of war matériel for the United States. This course would be expensive on account of damages because of contracts in existence, but it is the only method of coercion available. Difficulty will be encountered in getting early deliveries of matériel, as the factories are generally under contract for their capacity for a considerable period ahead. The maximum speeding up of production would also require very large appropriations and contract authorizations at the next session of Congress, and it would be necessary that legal restrictions on purchase in this country and abroad be removed.

I can not emphasize too strongly the vital importance of providing as quickly as possible for our first-line defense all matériel that requires time to design and manufacture.

SERVICE SCHOOLS.

Owing to the acute situation on the Mexican border, the Army service schools at Fort Leavenworth, Kans., the Mounted Service School at Fort Riley, the School of Fire and the School of Musketry at Fort Sill were closed May 10, 1916, and the class graduated as of that date, the student-officers and instructors being sent to join their regiments on the border. Since then several tentative dates have been fixed for the reopening of the schools, but the training of the Organized Militia on the border has been of such paramount importance and the necessity of every officer who could be spared from his organization being required for this purpose has so far prevented the reopening of the schools.

CHIEFS OF INFANTRY, CAVALRY, AND FIELD ARTILLERY.

It is fundamental military principle that the entire Military Establishment, and each of its various components, should have a military head (chief) superior in rank to all under his control, who directly supervises and may be held responsible for its training, efficiency of personnel, and other correlated matters. All staff corps and departments as well as the Coast Artillery now have such a chief. The Cavalry, Infantry, and the Field Artillery have not. Correct military principles and consequently military efficiency require that each of these arms should have such a chief and this chief while so serving should have one grade higher rank than any officer of his arm. This chief should be charged with the inspection of his arm and should supervise its training and equipment and all such chiefs should have the same status. If any arm be given an advantage over another, either in the matter of having a chief or in the matter of the

official standing of such chief, unequal consideration and treatment and unbalanced military development of these arms will naturally result. For the reasons stated, chiefs of Cavalry, Infantry, and Field Artillery should be provided for those arms as now authorized by law for the Coast Artillery. During the Civil War when American Cavalry was being developed along lines that have influenced all nations in the use of this arm, it became necessary to establish a bureau of Cavalry at the War Department and appoint chiefs of Cavalry also of Artillery of the various large commands.

The developments of modern war have made it equally necessary that we should have chiefs of Field Artillery and Infantry. For Field Artillery there are the many questions incident to personnel, organization, training, equipment, arm, etc., which demand the direct and constant attention of a single head or chief. The same is true for Infantry. It is generally admitted that in any final showdown the mobile army must be the main defense of the country. It is, therefore, important that all branches be maintained on the highest plane of efficiency, and this will be only possible when they are given exactly the same status, viz, a chief directly responsible to the Chief of Staff and Secretary of War. This accords with the recommendation made by the General Staff as well as the views of the line of the Army.

SITUATION ON MEXICAN BORDER.

Villa's attack on Columbus, N. Mex., night of March 8-9, 1916.—The small town of Columbus, N. Mex., with a population of a few hundred Americans and Mexicans, is situated on the El Paso & Southwestern Railroad, about 73 miles west of El Paso, Tex., and 3 miles north of the border. The country is flat and partly covered with mesquite brush, though troops can move in practically all directions, either mounted or on foot, except as prevented by the wire fence along the border.

The troops stationed at Columbus at the time of the attack comprised some 500 officers and men of the Thirteenth Cavalry, which regiment had furnished this garrison since September, 1912. During this period border conditions have varied so greatly that, shortly before the attack, a reduction of the garrison by half had been recommended.

The sector of the border assigned to this command covered about 90 miles and was patrolled by detachments varying in strength depending on the proximity of Mexican forces south of the border. During the months of January and February conditions were very quiet and only small patrols covered the border. Early in March there came rumors that Villa was somewhere near Columbus. The patrols and outposts were strengthened as considered necessary. Orders prohibited our troops from crossing the border to investigate rumors. Numerous Villa sympathizers lived in Columbus and vicinity, and Villa was fully informed of conditions at Columbus, including the disposition of troops.

Villa's command crossed the border in small parties about 3 miles west of the border gate, concentrated for and made the attack during hours of extreme darkness after the moon had set and before daylight.

In the fight which ensued 7 American troopers were killed and about an equal number wounded. Seventy-eight Mexicans were killed and many wounded. One troop mounted and pursued the Mexicans. Another on outpost duty at the border gate mounted and struck the retreating Mexicans in flank, killing 18. These two troops continued the pursuit of the Mexicans south of the border for 12 miles, discontinuing only when their ammunition was exhausted.

Expeditionary force into Mexico.—As a result of this attack the commanding general, Southern Department, was on March 10 directed to organize a suitable expeditionary force under the command of Brig. Gen. John J. Pershing to pursue Villa into Mexico for the purpose of capturing Villa and preventing any further raids by his band and with scrupulous regard to the sovereignty of Mexico. A command of sufficient size had to be assembled at Columbus, N. Mex. Owing to the nature of the country and the character of the pursuit it was necessary for the force to consist largely of cavalry. The Villa forces were all mounted and capable of making long marches. To have pursued at once with troops then on the border would have left the important border points, Douglas, Bisbee, Columbus, and El Paso, and intervening sections exposed to like raids. Therefore, before the expedition could start on its mission, it was necessary to send to that section the remaining available troops in the United States, which required approximately five days. During this time the first motor transport companies were organized and shipped from eastern points. Gen. Pershing's command crossed the border March 15, and at once took up a vigorous and energetic pursuit, neither men nor animals being spared in the long and arduous marches which resulted in driving the Villa bands over 400 miles southward and killing some 200 or more members. Officers and men of this command are deserving of the highest commendation.¹

Border conference with Gen. Obregon.—I proceeded from Washington on April 19 to Fort Sam Houston, Tex., arriving on the evening of April 21. My instructions were to discuss fully with Gen. Funston the object of Gen. Pershing's expeditionary force in Mexico, the extent to which it should be concentrated, the number of troops necessary, the extent to which the border could be adequately protected with the troops remaining in the Southern Department, and what, if any, additional troops were needed to meet conditions liable to arise. These matters were thoroughly gone over with Gen. Funston, our conclusions wired the War Department, and special instructions conforming thereto communicated to Gen. Pershing.

On April 24, I was instructed that a conference with Gen. Obregon had been arranged for Gen. Funston and myself to be held at El Paso, Tex., or that vicinity, and we should hold ourselves in readiness to proceed there on receipt of instructions. These instructions were received April 26, and on April 27 we proceeded to El Paso, arriving there on the evening of the 28th. Gen. Obregon having previously arrived in Juarez, Gen. Funston and myself, accompanied by our aides, called on him that evening. On the next day, April 29, Gen. Obregon returned our call, and arrangements were made for future conferences, commencing that afternoon.

¹A more detailed report of this expedition would have been made, but at this writing the report of the Southern Department and the report of Gen. Pershing have not been received.

On May 3 a tentative agreement was completed which was signed by Gens. Obregon, Funston, and myself, and submitted to our respective Governments. Subsequent conferences were held on May 7, 8, 9, and 11. The proceedings and the results of the various conferences were at once communicated in dispatches from El Paso. While the Carranza Government would not agree to ratify the tentative agreement signed with Gen. Obregon, the conference furnished most beneficial results in materially relieving a very acute situation and in demonstrating to Gen. Obregon and other Carranza leaders the pacific intentions of our Government.

It had in every way been most emphatically impressed upon Gen. Obregon that whenever the Mexican Government had demonstrated its capacity, and provided proper protection for our border, consideration would then be given to the withdrawal of our troops from Mexico.

Raid on Glen Springs, Tex.—On the night of May 5, 1916, a detachment of 9 enlisted men stationed at Glen Springs, with Sergt. Charles E. Smyth, Troop A, Fourteenth Cavalry, in charge, was attacked by from 50 to 100 Mexican bandits. Although surrounded and hopelessly outnumbered, this detachment stood off the bandits, suffering a loss of 3 privates killed, 4 wounded, and 9 horses captured. After leaving Glen Springs these bandits proceeded to Deemer's store, which was raided and Deemer carried off as a prisoner.

On May 6, Troops A and B, Eighth Cavalry, from Fort Bliss, Troops F and H and Machine Gun Troop, Fourteenth Cavalry, from Fort Clark, all under the command of Col. Frederick W. Sibley, Fourteenth Cavalry, were ordered to Marfa, Tex., to take up the pursuit and capture or destroy the bandits that had made the attack on Glen Springs and Deemer's store. These troops arrived at Marfa, Tex., May 7. One party of the bandits was surprised and attacked at Santa Anita, Mexico. Deemer was rescued and the bandits driven so far south and punished that the expedition fully accomplished its mission and on May 26 the troops were returned to their proper stations. All officers and men taking part performed this very arduous duty most commendably.

Attack at San Ignacio, Tex.—About 2 a. m., June 15, 1916, Troops I and M, Fourteenth Cavalry, were attacked by a large force of Mexican bandits at San Ignacio, Tex., Troop M having three men killed and one noncommissioned officer and three privates wounded, the noncommissioned officer fatally. These two troops, under the command of Maj. Alonzo Gray, pursued the bandits into Mexico, but being unsuccessful in picking up the trail, returned to the American side late the same day.

Calling out of the militia.—As a result of such raids and attacks by Mexican bandits there were continuous demands from border towns, villages, and ranches for regular troops to insure protection not only for property but for American women and children. With the continued pursuit of Villa bands by the expeditionary force under Gen. Pershing, the attitude of the Mexicans in general became more and more embittered against Americans. It is believed that the leaders felt that if the advance of the American troops continued southward into Mexico it would result in actual intervention by the United States, and with such an eventuality they would prefer to force

an open conflict. This feeling undoubtedly had its influence in increasing the number of raids, as bandit leaders were able to pick up the necessary recruits either for a small raid by a few men for stealing cattle or for a more extensive one to attack American camps. Owing to this attitude and the occurrence of these raids, it became urgent to provide at once more troops along the border to insure reasonable protection to both life and property as well as to permit Gen. Funston to be able to reinforce Gen. Pershing with a regular force of sufficient size to meet possible attacks. Gen. Pershing's expeditionary force was more or less scattered, with his advance units some 400 miles in Mexico. The entire Regular Army stationed in the United States, with the exception of a regiment of Cavalry and some of the Coast Artillery, was either already distributed along the border or with Gen. Pershing's expeditionary force. There being no regular troops available, the militia of Texas, New Mexico, and Arizona was ordered out May 9. This eased the situation materially, but it was only temporary.

The Mexican leaders became insistent upon the withdrawal of Gen. Pershing's expeditionary force and threatened to attack any of our detachments in Mexico marching in any direction other than toward the American border. Conditions became such that an immediate increase in the border troops was necessary. The only organized force available was the National Guard, which was accordingly ordered out by the President June 18 and the greater part sent to the border as promptly as possible.

The mere calling out of the militia had the effect of completely changing the attitude of the Mexicans, and the presence of this additional force has enabled sufficient numbers of troops to be stationed so as to furnish adequate protection to American homes near the border, which they have been without for from five to six years.

The mobilization of the militia in the large camps established at or near Douglas, El Paso, Fort Sam Houston, and Brownsville has also enabled these troops to receive practical instruction with trained officers under field conditions which would not otherwise have been possible.

THE ORGANIZED MILITIA AND THE NATIONAL GUARD.

According to the latest return of this force, before being called into service 1,451 officers and 6,131 enlisted men belonged to the staff noncombatant branch; 456 officers and 8,084 enlisted men to the Coast Artillery; and 6,682 officers and 109,390 enlisted men to the mobile branches, a total of 8,589 officers and 123,605 enlisted men.

The plan of organizing the mobile troops and the National Guard into 12 tactical divisions has made some progress during the year; however, no division is complete. The division in the State of New York and the division in Pennsylvania are most advanced in divisional organization. On June 30 both were deficient a few auxiliary units. On a divisional basis there is an excess of Infantry units equivalent to 17 regiments, and a deficiency of 52 troops of Cavalry, 58 batteries of Field Artillery, 49 machine-gun companies, 12 medical supply detachments, 8½ battalions of engineers, 26 field hospitals, 17 ambulance companies, and 17 sanitary detachments. There is a deficiency in Coast Artillery of 261 officers and 9,239 en-

listed men in order to provide their half of the complete manning of guns of harbor defense elsewhere referred to.

The numerical strength of the National Guard was 18,195 enlisted men below the minimum authorized peace strength. Reports show that only about 43 per cent of the reported strength attended at least 24 drills of one hour per day during the year.

Reports on small-arms target practice are incomplete. Seven States have submitted no report. Of the remaining States only 58 per cent fired range practice; 128 companies of Coast Artillery attended camps of instruction at or near harbor-defense batteries. The reports of 46 of these companies show that only 72 per cent had service practice. Six batteries of Field Artillery attended camps of instruction and one battery had service practice prior to call of June 18, 1916. Six special camps of instruction were held for officers and noncommissioned officers. Other camps which were planned had to be abandoned by reason of the organizations being called into the service of the United States.

The effect of pay for armory service is yet to be determined and can not be judged until the National Guard in the service of the United States has been mustered out and has assumed its normal peace training. The plan of organizing the mobile and auxiliary troops of the National Guard into tactical divisions will be modified, both as to organizations specified and as to geographic distribution in order to adapt it to the national defense act.

There was called into the service of the United States on May 9 and June 18, 1916, 108 regiments and 7 separate battalions of Infantry; 3 regiments, 13 separate squadrons, and 22 separate troops of Cavalry; 6 regiments, 12 separate battalions, and 17 separate batteries of Field Artillery; 3 battalions and 11 separate companies of Engineers; 4 battalions, 16 separate companies, and 1 aero company, Signal troops; 22 ambulance companies and 37 field hospitals. There were already organized on June 18 two Infantry divisions, 19 Infantry brigades, and one Artillery brigade. On July 31 reports show that 110,957 were on the border and 40,139 in State mobilization camps, aggregating 151,096. This aggregate strength was deficient by 4,083 of the authorized minimum peace strength and short war strength by 97,350 men.

Forty-four officers of the Army were commissioned in the National Guard. Called into service were 3 as brigadier generals, 10 as colonels, 27 as lieutenant colonels, and 40 as majors. There were also commissioned of noncommissioned officers of the Army, 34 in the Infantry, 9 in the Cavalry, 7 in the Field Artillery, and 1 in the Signal Corps. Two major generals and 24 brigadier generals of the National Guard, in addition to the 3 brigadier generals commissioned from the Regular Army, were mustered into the service of the United States.

In 11 States from which complete returns are at hand 16,630 officers and men in the aggregate were on the rolls at the date of call. Of this number 1,761, or a little over 10 per cent, failed to report. Of the remainder who reported in response to the call 4,385, or about 29 per cent of those examined, failed to pass the required physical examination. From the two causes combined 37 per cent of the aggregate strength at the date of call failed to materialize as soldiers. By these subtractions the original aggregate was reduced

to 10,484 officers and men. To these were added 7,950 new recruits without former service, making a final strength of 18,434. Making a comparison by percentages, about 57 per cent of the final strength were officers and men with more or less former training in the National Guard and 43 per cent were without former service or training. These figures will probably hold good approximately for the entire body of the National Guard.

When we consider that the National Guard when called upon was obliged to take with it, at a minimum strength, 43 per cent of men without former service or training, which, when it is recruited up to war strength of 150 men to a company, with its present state of development would amount to 75 per cent of untrained men and these commanded by officers of very limited experience, the conclusion is obvious that it is a very expensive military system, which is no sooner called into service than the department is inundated with requests for the discharge of individuals and Congress is called upon to make provision for families left behind. Discharges from these and other causes were so great that department commanders were authorized to provide three recruiting parties for each regiment mustered into the service of the United States. These parties consisted of a commissioned officer, a noncommissioned officer, and a private, and were maintained at Government expense. The results, however, were so unsatisfactory owing to the lack of recruits that orders have recently been issued to the commanding generals of several departments authorizing them to discontinue National Guard recruiting service when in their opinion the results obtained do not warrant its continuance. This may be illustrated in the State of New York in which the militia organization was very much above the average. From August 2 to September 6 only 351 recruits were secured at an average cost necessitated by the keeping up of recruiting parties of \$40 per recruit. This was the cost to merely get the man. The system speaks for itself in dollars and cents, which is readily understood by the average man. In the State of Massachusetts 20 recruiting stations were established; between August 1 and September 25 they enlisted only 189 recruits.

THE MILITIA BUREAU.

The following is taken from the report of the Acting Chief. Militia Bureau:

Under the provisions of section 81 of the amended militia law, the "Division of Militia Affairs in the office of the Secretary of War" formerly constituted by War Department orders as a subdivision of the office of the Chief of Staff, becomes the Militia Bureau of the War Department "under the immediate supervision of the Secretary of War and shall not form a part of any other bureau, office, or organization."

The National Militia Board created by the act of May 27, 1908, is abolished and the President is authorized to assign one colonel and one lieutenant colonel of the National Guard to duty in the Militia Bureau as assistants to the chief thereof.

The officers of the National Guard who can be of most service as assistants in the Militia Bureau are those who have had experience in an administrative capacity, particularly as quartermasters and disbursing officers. As a general rule experience of this sort should be a necessary qualification for assignment.

In drafting the provisions of the act of June 8, 1916, it was the evident intention of Congress to exercise to its full extent its constitutional powers to

"provide for organizing, arming, and disciplining the militia" within the limit, "reserving to States, respectively, the appointment of the officers and the authority of training the militia according to the discipline prescribed by Congress." The National Guard is federalized as far as it can be federalized under the constitutional restrictions.

This was the desire of the representatives of the National Guard Association as expressed in their hearings before the Committee on Military Affairs of Congress. There is, however, considerable evidence that the construction placed upon the term federalization by these representatives did not involve vesting in the Federal Government the greatest amount of control over the National Guard consistent with the terms of the Constitution. On the contrary, a report of a legislative committee of the National Guard Association proposed, in November, 1915, to reduce the already inadequate powers conferred on the Federal Government in the militia law of 1903 by securing the adoption of a constitutional amendment which would place the very important power of determining the organization of the National Guard, now a prerogative of the Federal government, in the hands of the States. The adoption of such an amendment would have resulted in complete heterogeneity in the composition of the militia of the several States and would have destroyed all possibility of developing the National Guard into a force organized to meet the necessities of national defense. Further evidences of the opposition to any real federalization is found in draft of a bill "to provide for the organization, armament, discipline, and government of militia of the United States and to further provide for the national defense" (Committee print, J. 26698-1) which was offered with the sanction of the executive committee of the National Guard Association. The outstanding feature of this draft was the creation of a militia section of the General Staff, composed entirely of National Guard officers, with powers so extensive as practically to insure the control of the National Guard by its own members and to destroy such power as was possessed by the War Department to control the training of the militia as an effective Federal force. The tendency of the proposed legislation may be gathered from certain provisions here mentioned. The scope of the examinations to determine the fitness of candidates for commission in the National Guard was to be determined by the militia section of the General Staff, the examinations themselves to be conducted by boards appointed by the governors of States or Territories. Regulations fixing the standard of military fitness which should entitle members of the National Guard to Federal pay were to be prescribed by the militia section. Although projects evolved by the militia section could not be carried into effect until approved by the Secretary of War, he could not reverse their decision and put into effect plans which appeared to him more effective, but could only interpose his objection and if the militia section persisted, a deadlock would result. These provisions are of importance when considered in connection with the subsequent amendment to the Army reorganization act which was urged for the addition of five militia officers to the General Staff. It is difficult to escape the conclusion that the purpose of this amendment was to create in the city of Washington a body of militia officers in whose hands the control of militia affairs would be vested and through whom a practically complete independence from Federal control would be attained.

Such a result would be deplorable. It would involve the predominance of local interest over the interests of general national defense. Two systems would have been built up, the existence of which, side by side, would have destroyed all idea of the coordinated action under a common control which is the real significance of federalization. It would be almost inevitable that militia officers serving in such a capacity would become the representatives of local interests and the wielders of local influence for the benefit of local interests in national military affairs in much the same way that this function was exercised by a group of National Guard representatives in bringing local influence to bear on the legislation enacted at the recent session of Congress. Their official position would give sanction to their statements, and their nonamenable to military jurisdiction would relieve them from a sense of responsibility for their actions.

It is but just to say that there was not full concurrence on the part of the National Guard in the views of their representatives and in the measures advocated by them. Probably the provisions of the new defense act as they apply to the National Guard much more nearly conform to the ideals and sentiments of the National Guard as a body than the original measure proposed by the committee of National Guard representatives.

It is believed that under the act of June 3, 1916, the powers of Congress to vest control over the National Guard in the Federal Government have been practically exhausted. Every power that can be granted to the War Department has been conferred, and the needs of the National Guard in respect to compensation have been met. This leaves no further material legislative changes to be sought to increase the efficiency of the system. A failure to attain a reasonable degree of efficiency with the facilities provided will be attributable only to defects too inherent in the militia system to be subject to correction by legislative action.

MOBILIZATION OF THE ORGANIZED MILITIA AND NATIONAL GUARD.

Organizations of the militia and National Guard of the States of Arizona, New Mexico, and Texas were called into the service of the United States on May 9, 1916. These organizations were directed to proceed from the home rendezvous direct to their border stations.

On June 18, 1916, the Organized Militia and the National Guard of all the other States were called into the service and directed to assemble at their State mobilization camps. The movement from the company rendezvous to the State camps was under the control of the State authorities and from those camps to the stations designated on the border under direction of the War Department. These troops began leaving their mobilization camps June 27 and on July 1 there were en route to the border from various sections of the United States 122 troop trains, carrying over 2,000 passenger and baggage cars, with a total strength of 36,042 men. Four days later 101 troop trains were en route to the border; 56,681 militia troops were either at the border or en route to the border. Up to July 31, 112,000 militia troops were transported to the border.

The task imposed upon the railroads of the country involved 350 trains to carry the first 100,000 men. Over 3,000 passenger cars were provided and, in addition, about 400 baggage cars, most of which were equipped as kitchen cars for serving hot meals en route, 1,300 box cars, 2,000 stock cars, and 800 flat cars. This call upon the railroads came at a time when their passenger traffic was at its height. All railroads concerned gave preference to troop movements over other travel. The distance traveled by the militia organizations was from 600 to 3,000 miles, the majority of these troops being carried over 2,000 miles. It was impracticable to furnish tourist sleepers for all the troops, but over 600 tourist and standard cars were made available for the movement. In cases where tourist cars could not be furnished, day coaches were supplied at the rate of a double seat for each man where the distance was long. Wherever tourists could be secured en route they were placed in the train and men transferred from coaches to these tourists up to the number that could be berthed. Official reports from all departments show that no organization moved in coaches with less space than three men to every four seats. The average number of men transported in coaches was 30 to the coach. When we consider the great distance traveled, the celerity with which trains were moved, and the entire absence of congestion or delay, it is believed that there has been no case in our history where troops have been so well and safely transported. Especial credit is due the transportation division of the Quartermaster General's Office for bringing about the cooperation which existed among the transportation companies. (Over a year ago the matter was taken up by the head of that division, who outlined the plan of mutual

cooperation before several of the transportation associations and brought about the establishment within the American Railway Association of a committee on military transportation with a view to coordination and cooperation between the railroads and the War Department in the transportation of troops and supplies for the United States.

Immediately after the call for mobilization of State troops arrangements were made through this committee for placing a competent railroad official at each department headquarters, at each mobilization camp, and the office of the Quartermaster General, who could act as advisers to the quartermasters at these various points on matters affecting rail transportation. In this way the railroad equipment of the country became available to effect this movement in the most expeditious manner possible.

A series of placards was adopted by which cars of Government freight were given the right of way from point of origin to point of destination and were placed in fast-moving freight trains to point of destination where immediate delivery was made, the placards themselves serving to identify all shipments. The placards showed the department to which the supplies belonged and all information of the car and contents. In this way many shipments have been sent from Washington and vicinity to the Texas border in 4 days; and from the Lakes to the border shipments have been made in a little more than 48 hours. This cooperation of the railroads has been rendered without hesitation, without additional charge to the Government, and with all the energy possible. This placard, with the full cooperation of the railroads, has removed one of the principal sources of criticism applicable to the mobilization in 1898. With the plan of cooperation now working with the transportation interests, the problem of rail congestion has been eliminated and it is not believed possible to repeat the mistakes of 1898. The cooperation of the American Railway Association representatives, with their knowledge of transportation conditions, eliminated a great deal of trouble heretofore experienced in the mobilization of large bodies of troops, and the War Department is highly appreciative of this voluntary and able assistance.

Subsistence.—When the National Guard is called into the service of the United States they are subsisted at the expense of the Government from time of arrival at company rendezvous, but it is supervised and provided for by the military authorities of the State and also at State mobilization camps until sworn into the service; then they come under the supervision and control of the Federal authorities and are subsisted as are other troops of the Regular Army.

When these troops were transported to the Texas border, kitchen cars or baggage or box cars, furnished with range installed, were provided with each train by which the food could be prepared. When ready for transportation 10 days' rations were furnished to make the journey to destination and afford them a small supply in addition for emergencies.

The subsistence of the soldier is of vital importance as conducive to his health, contentment, and efficiency. Our Army ration is the most liberal of that of any in the world, notwithstanding that complaint was occasionally made as to the poor quality and insufficiency of food furnished various militia organizations. Each case of com-

plaint was investigated thoroughly and the records indicate that practically all were unfounded or due to the inexperience of cooks of the National Guard or lack of experience and training of these organizations in taking care of themselves. Extensive inspections of the National Guard have borne testimony to the thorough and satisfactory manner in which troops have been subsisted in Texas and on the border.

Rolling kitchens.—All European nations use some type of rolling kitchen by which men, after the fatigue of march or action, can be quickly furnished with hot soup or other substantial diet. A number of experiments or tests of various types have been made during the year. An American type has now been procured and shipped to the Southern Department for elaborate field test. These tests should result in the adoption of a type as good as any in existence.

Field shoes.—The constant service on the border has demonstrated that our regulation shoe was too light and did not possess the necessary wearing qualities for service in the field. As a result of an experiment with 600 pairs with uppers made of undressed side leather and soles of adequate thickness and provided with hob nails, made upon the lasts as heretofore used in the manufacture of Army shoes, it is believed that a proper field shoe has been obtained. The Quartermaster Department is now purchasing 365,000 pairs which are being sent to the troops as fast as accepted from the factory.

Uniforms.—The impossibility of importing dyes which have been used to produce the fast color and shade in the olive-drab woolen and cotton fabric entering into the manufacture of material for uniforms for the Army for a while produced a serious situation, but manufacturers now claim to be able to produce suitable dyestuffs in the United States.

Motor transportation.—In 1907 the first motor truck for carrying supplies was purchased. Since then there has been constant progress in developing the motor truck as a means of transportation. During the early part of 1916 motor transportation was confined to operation of trucks in transporting supplies to outlying camps on the border. When instructions were given for the organization of a force to cross the Mexican border in pursuit of the band which attacked the town of Columbus, N. Mex., there was received a request from the Southern Department for two motor-truck companies of 27 trucks each of 1½ tons capacity, equipped with the necessary personnel for their operation. Two additional truck companies, as well as the necessary tank trucks, followed soon after. It was the use of motor trucks which made possible the long advance of this expeditionary force into Mexico. There was such an increase in the demand for motor trucks that on June 30 there were in use 588 motor trucks, besides tank trucks, motor machine trucks, and wrecking trucks. It is reported that the approximate cost of operation of trucks per ton-mile is 70 cents, which includes all incidentals such as upkeep of repair shops, roads, etc. Motor trucks will remain an important factor of transportation in our Army, as they have in every other army.

HEALTH OF THE ARMY.

The general health of the Army was excellent during the year. There were no epidemics or unusual incidents of infectious diseases.

The mean strength of the entire Army for the calendar year 1915, upon which the statistics contained in the Surgeon General's report are based, was 103,842.

The admission rate for the entire Army during 1915 was 726.19 per 1,000, as compared with 660.45 for 1914. With the exceptions of 1914 and 1913, the 1915 admission rate is the lowest in the last 10 years and shows a marked decline since 1906, when it was 1,188.

The noneffective rate for the entire Army for 1915 from all causes was 25.22 per 1,000 (for disease alone, 20.85), which is slightly higher than that for 1914, the lowest noneffective rate in the history of the Army, but still much below the rates for any preceding year, except 1913, when the rate was 23.98 per 1,000. This rate during the past decade shows a steady reduction. In 1906 the noneffective rate was 47.86.

There were eight cases of typhoid fever in the entire Army during the year 1915, only four of which occurred among troops serving within the continental limits of the United States.

There were no deaths from typhoid fever during the year.

The noneffective rate for this disease was 0.02 per 1,000.

All of these cases, with one exception—a recruit—had been vaccinated against typhoid fever, with intervals elapsing between the time of vaccination and the onset of the disease varying from 8 months and 18 days in the shortest period, to 4 years 7 months and 2 days in the longest. The average interval for the year 1915 was 2 years 2 months and 10 days. The average interval for the past 3 years was 2 years 1 month and 5 days.

The admission rate from alcoholism and its results for the entire Army during the year was 12.68, as compared with 13.64 in 1914 and 13.54 in 1913. This rate is the lowest in the history of the Army and shows a steady diminution since 1907.

The death rate of the entire Army for 1915, from all causes, was 4.45 per 1,000, compared with 4.40 for 1914, which was the lowest mortality rate in the Army for many years. The death rate from disease was 2.53 per 1,000 for 1915; the same rate for 1914 was 2.35, and that for 1906 was 3.77.

The discharge rate for the year from all causes was 14.06, somewhat higher than for 1914, when the rate was 12.78 per 1,000, but still markedly less than the discharge rates prior to 1910, when they ranged from 16.64 upward.

The total losses of the Army from all causes (deaths, discharges, and retirements) was 18.03 per 1,000 for 1915; for the year 1914 it was 16.86, the lowest in the past decade.

Malarial fevers show the lowest noneffective rate in the history of the Army, 0.54. In 1906 the noneffective rate for malarial fevers alone was 2.55 per 1,000. The decade following that year has demonstrated the effectiveness of the antimalarial measures that have been unceasingly employed by the sanitary officers of the Army each year, exhibiting, with but two exceptions, a marked decrease in the incidents of the disease.

The record in the Philippines has been specially creditable compared to former years, though here, as in Panama, the Medical Department has been seriously handicapped at several posts through lack of screening due to insufficient appropriation of funds.

The highest noneffective rate, for disease, for the year 1915 was among the troops stationed in China, 31.79 per 1,000. Then follows Panama with 21.66; the Philippine Islands, 21.42; the United States, 20.90; Porto Rico, 20.57, and Hawaii and Alaska with the lowest noneffective rates for the year 1915, 16.20 for Hawaii and 6.02 for Alaska.

Paratyphoid fever.—Nine cases of paratyphoid fever occurred in the entire Army during the calendar year 1915. Three of these cases were reported from the Philippine Islands and one from the Hawaiian Islands, leaving but five distributed throughout the United States.

The Acting Surgeon General states:

Paratyphoid fever is a distinct clinical entity and is not typhoid fever, though sometimes resembling typical cases of that disease. It is caused by a different micro-organism, the bacillus paratyphosus, of which two types are distinguishable: *B. paratyphosus* "A" and *B. paratyphosus* "B". In western Europe, as reported, paratyphoid fever is much more frequently due to the "B" type of bacillus than to the "A" type. Clinically they are hardly distinguishable, but it is stated that the "A" fever is apt to last three or four days longer.

Paratyphoid fever, heretofore but infrequently met with in our Army, appeared in the New York division of the National Guard, stationed in the Brownsville district in August, 1916, principally among the troops at Mission, Tex. A few scattering cases at other points occurred in the same district, in all, a total of about 120 cases. It is probable that this portion of the State of Texas contains many carriers and foci of paratyphoid fever.

The outbreak of this disease was promptly and satisfactorily met. The vaccination against paratyphoid fever with mixed paratyphoid "A" and "B" vaccine, prepared in the laboratories of the Army Medical School, was immediately authorized and the searching of carriers of the disease was vigorously prosecuted, camp sites were changed and all sanitary orders rigidly enforced under the direction of inspectors of the Army Medical Corps.

The results of these measures were immediately successful in checking this outbreak. The disease as it manifested itself in the New York division of the National Guard was generally very mild in character and no deaths occurred.

THE HOSPITAL TRAIN.

With the movement of the militia to the border, the majority of whom had been suddenly removed from the comforts and luxuries of civil life and stripped to the bare necessities of fighting men, bringing the force along the border to about 150,000 men, it was inevitable that a certain amount of sickness and disability would occur. Camp hospitals were established at certain points, larger (base) were located at El Paso and San Antonio. Motor and animal drawn ambulances were provided for the transport of the sick and injured from the field to the near-by camp hospitals. The trivial cases, or those requiring only short periods of convalescence, were cared for in the camp hospitals and the more serious cases transferred to the base hospitals. A certain proportion of the latter cases which required more invigorating climate and changed surroundings were evacuated to the interior general hospitals at Wash-

ington, Hot Springs, San Francisco, and elsewhere. Provision was made for long-distance trips along the border and in the interior by a hospital train. The hospital train consisted of 10 modified standard Pullman cars, constructed at the Pullman shops and designed jointly by a medical officer of the Army and the supervising constructor of the Pullman shops. This new train is different from those of the Spanish War, which were standard Pullman cars, practically without modification. The total capacity of the new train is 76 bed cases and 120 ambulance cases. Wherever the Pullman equipment has been removed, the regulation Army medical equipment has been substituted. The use of hospital trains in active warfare is of modern development and very necessary for proper care of the sick and wounded.

PHILIPPINE SERVICE.

The details of administrative matters, which in every department of government are left to the responsible head, are, for the War Department, often confused by limitations injected in appropriation bills. To illustrate, the Army appropriation act, approved March 4, 1915, provided "That on and after October first, nineteen hundred and fifteen, no officer or enlisted man of the Army shall, except upon his own application, be required to serve in a single tour of duty for more than two years in the Philippine Islands, nor more than three years in the Panama Canal Zone, except in case of insurrection or of actual or threatened hostilities."

Previous to this time, the War Department had fixed upon three years as the tour of duty for the Philippines for officers. This decision was based upon reducing the cost of the upkeep of this garrison to a minimum, and increasing the efficiency of troops to a maximum. Regiments had been made permanent; this was done not only to reduce the expense of upkeep, but because the plan of changing regiments once every two years had been given trial for 14 years, with results that it was found practically impossible to maintain in the Philippines any military organization well prepared for duty which might be required in case of invasion.

About the time of the regulation of the matter by Congress, applications by officers for Philippine service had become so numerous that the Secretary of War had decided that in order to give all an equal chance that officers should go on a roster and take their turn.

The present law is very disrupting to the efficiency of the service, expensive to the public funds in the carrying out, and it is involving many of our young officers with families in serious financial problems. Every officer in the Philippines must change station at least once every two years, and they may be detailed on staff and other duty while there, and then return to a camp station on the border, with the only provision for their family in rented rooms in houses in a near-by town. For the young married officers of limited income this frequent change of station is a veritable curse.

The length of service for the Philippines was fully considered two years ago from every viewpoint, including that of health, and due to the opinion of the great majority of general officers including the Surgeon General, the tour was continued at three years. The noneffective rate for 1915 per 1,000 for the Philippines, as previously

noted, was only 21.42, as compared with 20.90 for the United States. The present restriction should be removed and the Army permitted to work out such problems in a rational and businesslike manner.

SHELTER FOR TROOPS.

The existing barrack accommodations were built to provide for a minimum strength of 65 for Infantry companies. The national defense act, which raises the minimum strength to 100 and provides additional units to regiments in the machine-gun, headquarters, and supply companies for Infantry and Cavalry regiments, and supply and headquarters companies for Field Artillery regiments, will necessitate the extension of existing barrack accommodations to provide for these increases. This will necessitate increased estimates for barracks and quarters for the fiscal year 1918 to complete the work of extension of existing barrack accommodations in permanent and abandoned posts of the United States for that portion of the first increment of increase to be taken care of in the United States and to provide temporary quarters for that portion of the increment assigned to the Philippines and Panama and permanent quarters to regiments assigned to the Hawaiian Islands. It will be necessary to provide permanent construction for the second increment of increase in the United States and Hawaii and to continue the temporary shelter in the Philippines.

The estimates for construction work pertaining to the military service on the Panama Canal Zone have heretofore been prepared by the Panama Canal authorities, and these authorities will continue to prepare estimates and undertake construction for that portion of the Army there located.

TRANSFER OF GUARDIANSHIP OF YELLOWSTONE NATIONAL PARK TO THE INTERIOR DEPARTMENT.

United States troops have been used in the Yellowstone National Park since 1886 under the provisions of the act of March 3, 1883, to prevent trespass, intruders, etc. It was at first the practice to detail a certain number of troops of Cavalry for this duty. In 1914 it was arranged to use a detachment for this purpose of 8 officers and 200 enlisted men. The Interior Department being charged with the care of national parks, the use of regular troops for police purposes naturally caused conflicting responsibilities between the War and Interior Departments. Since the passage of the act of 1883 conditions have materially changed. The States surrounding the national parks extended the protection of State laws governing killing of game, and the sentiment of communities surrounding the parks became more law-abiding and favored complying with the laws and regulations governing park administration. In the interests of economy as well as the efficiency of the Army, it was deemed advisable to urge the transfer of the guardianship of all national parks to the Interior Department. This was effected for the Yosemite and Sequoia Parks in 1914. The transfer of the Yellowstone National Park was not acceptable at that time to the Interior Department, owing to the lack of appropriations necessary for the employment of civilian rangers. In July of this year the Secretary of the Interior

advised the Secretary of War that the Department of the Interior was ready to cooperate in making arrangements for the complete withdrawal of regular troops from the Yellowstone National Park, suggesting that the detachment of troops now on duty in the park be retained there until shortly after the close of the present tourist season, between September 15 and October 1, and that specially selected cavalymen be made available for service as civilian rangers upon the withdrawal of the United States troops. Instructions were given for this transfer of the guardianship of the park to the Interior Department to take effect October 1. Such enlisted men as are qualified and desire to become rangers will be discharged from the Army for employment by the Interior Department. Movable Government property at Fort Yellowstone has been ordered shipped to other points. The buildings, water system, telephone lines, except those required for use by the Engineer Corps in the park, will be transferred to the Department of the Interior, as was done in the case of the Yosemite and Sequoia National Parks at the time of their transfer.

REVISED ARTICLES OF WAR.

The project for the revision of the Articles of War has been under consideration of the War Department for the past 13 years and before Congress for the past 4 years, and was enacted into law in the Army appropriation act approved August 29, 1916. With the exception of a few articles which take effect immediately, the revision will go into effect March 1, 1917. In the meantime the Judge Advocate General will have the Manual for Courts-Martial revised and distributed through the Army by February 1, 1917, in order that there may be a month available for its study before the new code, as a code, takes effect.

DESERTION.

There were 2,382 desertions reported during the fiscal year 1916, which is 2.40 per cent of the whole number of enlistment contracts in force during the year, which is a decided improvement when compared with 4,435 reported desertions and a percentage of 3.23 for the last year. These figures include the cases in which the charge of desertion was removed as having been erroneously made in which the accused was acquitted and in which he was convicted of the lesser included offense of absence without leave and retained or dishonorably discharged from the service. The following table exhibits the true as compared with the reported percentages for the past eight years:

Year.	Deser- tions reported.	Charges unsus- tained.	True number of deser- tions.	Reported percent- ages.	True per- centages.
1909.....	4,993	311	4,682	4.97	4.66
1910.....	3,464	696	2,768	3.66	2.92
1911.....	2,504	380	2,124	2.28	1.93
1912.....	3,411	560	2,851	3.00	2.50
1913.....	4,451	871	3,580	4.15	3.34
1914.....	3,882	810	3,072	3.10	2.45
1915.....	4,435	795	3,640	3.23	2.65
1916.....	2,382	588	1,794	2.40	1.81

It is believed that a material improvement in discipline was effected in the revised punishment order published two years ago, which made important changes in the regulations governing punishment to be imposed by military tribunals. The statistics of the Judge Advocate General show a very great lessening in the number of enlisted men now placed in confinement in the guardhouse to serve punishments as compared with former years.

AVIATION.

The concentration of forces under Gen. Pershing to protect our border marked a distinct step in military aviation in the United States. It was the first time a tactical unit from this branch was put in the field. There was only one such unit, the First Squadron, San Antonio, Tex., equipped with eight low-powered machines, which, at the time of their transfer to Columbus, had been in service for many months. The altitude up to 12,000 feet encountered in Mexico and the long distances to be covered made this theater a very difficult one in which to operate aeroplanes. Valuable service and a great amount of flying were rendered, but the machines were quickly used up. The appropriation of \$500,000 made by Congress March 31, 1916, for the Aviation Section was the largest appropriation that had been made for aviation up to that time. Civilian consulting engineers were obtained in connection with the board of officers of the Aviation Section, and this board recommended the purchase of types of material. Twelve 160 to 200 horsepower biplanes were purchased. These, with other material, gradually equipped the aero squadron with Gen. Pershing in all details—motor trucks, portable machine shops, automatic photographic cameras, machine guns, shoulder rifles, bombs, and other accessories. Difficulty was found with the propellers, due to the high altitude and the dry atmosphere of northern Mexico. Finally a propeller-making plant was established at Columbus and engineering talent all over the country consulted in the solution of the problem, to the end that troubles were satisfactorily solved.

The project for the development of the Aviation Section contemplates 7 aero squadrons for the Regular Army, 12 squadrons for the National Guard, and 5 for the defenses on the coast. The aviation field is a new one to the United States, but the progress it is making in training personnel and in developing material is so far satisfactory.

WASHINGTON-ALASKA MILITARY CABLE AND TELEGRAPH SYSTEM.

This system embraces 2,627 miles of submarine cable and 448 miles of land telegraph lines, 52 officers, and 10 radio stations. Receipts for current business handled during the year were \$159,819, and the value of official business at commercial rates amounted to \$194,571. The yearly outlay for this system is about \$442,000 and is charged against the Army appropriation. There is no sufficient reason for continuing this system at its present cost against Army appropriations, for the reason that land communication with the military garrisons in Alaska can be secured through Canadian lines in combination with our wireless system in Alaska. The maintenance of this

system has been a heavy burden upon Army appropriations as well as upon the personnel of the Army, requiring as it does a number of officers and about 200 Signal Corps men to conduct the business efficiently and maintain it in operation. In addition to the personnel it has been necessary to maintain a cable ship. For five years effort has been made to have this system turned over to the Post Office Department, as it is of the greatest possible value to the commerce of Alaska, mail service of that country, and to the various departments of the civil government. A bill was introduced in Congress two years ago to turn this system over to the Interior Department. Either the Interior or the Post Office Department had better be charged with the cost and maintenance of these lines than the Army appropriation. It is recommended that further effort be made to have this burden transferred.

SUPPLY DEPOTS.

In 1911 a policy was adopted which established depots of supplies in areas within which troops were to be mobilized in the event of war and retaining in these depots the supplies necessary to supplement and completely equip Organized Militia units should they be called into service. Three field supply depots were established—one in Philadelphia, one in St. Louis, and one in San Francisco. The fundamental idea was that any call for militia would be made in such time as to permit the shipment of supplies from these depots to mobilization camps in advance of the troops arriving from their company or regimental rendezvous. The lack of complete reserve stores and the desire to decrease expense incident to storage limited these depots to three. The largest of these depots, and the only one of the three recognized by specific appropriations, is the one located at Philadelphia, in which were stores to equip the Organized Militia of 16 States, containing the greater part of the Organized Militia. The inadequacy of this plan was fully demonstrated in the sudden call for the militia on June 18 last to meet an emergent condition on the Texas border. It was deemed necessary to send these troops to the border as expeditiously as possible, as their presence there was necessary to save a vast amount of property and women and children in that section in case a break should have occurred in our relations with Mexico. This hurried call found the principal supply depot at Philadelphia somewhat depleted in supplies, due to lack of appropriation for complete reserve supplies, to the necessity of sending a part of the supplies on hand to the Militia of Texas, New Mexico, and Arizona, and to an increase of 20,000 enlisted men in the Regular Army. The siding facilities at the depot were limited—two sidings each capable of accommodating five cars at a time—so that it was some days before supplies could reach the necessary points of mobilization. It was a physical impossibility to expect supply departments to anticipate the action and have blankets and clothing at mobilization camps prior to the arrival of men and recruits, covering as it did States from Maine to Florida.

These depots were an experiment, but it has demonstrated that in a sudden call for troops, the system of a small number of supply depots for so many troops is an impracticable one for expeditious mobilization. As all calls for the Organized Militia will probably

be of a sudden and emergent nature, it seems imperative that supplies and equipment of all kinds for each State that are necessary for immediate use in the field should be stored within State limits and where practicable in the storerooms of regiments themselves under the direct control of the inspector-instructors on duty with regiments. Arrangements should be made for reserves of animals. There was no appropriation for horses and mules which had to be purchased after the call. The equipment which can not be obtained on 15 days' notice is that for which general supply depots should be provided. Based upon our experience in this mobilization, a board has been convened to submit a new plan for the supply of National Guard and volunteers when mustered into the service of the United States which when made will be subject to the scrutiny and recommendation of the General Staff.

AUTHORIZED LAND PURCHASES.

The current Army appropriation act makes provision for the acquirement of lots of land for military purposes.

Three hundred thousand dollars is appropriated for the Aviation School and Training Ground at San Diego, Cal. The site has been recommended by a board of officers, and steps are now being taken to acquire it. There was an additional appropriation of \$300,000 for other land for aviation purposes in case no military reservations were found suited to the purpose. A board of officers has been appointed to examine the present reservations. Action will be taken as soon as this report is received.

At Fort Sam Houston, Tex., an appropriation of \$750,000 was made for the acquisition of additional land for adequate supply depots, for terminal facilities of that post and for the Southern Department. The land is estimated to cost about \$300,000. Steps are being taken to acquire the land under consideration.

For Vancouver Barracks, Wash., \$100,000 was appropriated to provide suitable target ranges for each arm of the military service stationed at that post. The land was to cost about \$70,000. Suitable sites are under investigation by department and post authorities.

For Fort Bliss, Tex., \$120,000 was appropriated for the acquisition of certain private holdings now within the target range. Effort is now being made to purchase these tracts within the appropriation. If this fails, condemnation proceedings will be resorted to.

Three hundred thousand dollars is appropriated for the acquisition of the necessary land for suitable ranges for field artillery practice. These purchases are under investigation by the Militia Bureau.

The last Army appropriation act also directed the Secretary of War to investigate and report to Congress as soon as practicable what additional tracts are necessary for permanent mobilization, training, and supply stations for use by the National Guard and by the Regular Army and the probable cost of same. A board of officers is to be appointed to make thorough report upon this subject.

The fortification act approved July 6, 1916, provided the sum of \$1,400,000 for the acquisition of sites for coast defenses and this amount is to be applied to the acquisition of the land required at Rockaway Beach. Negotiations are now in progress with a view to the completion of the acquisition of the land as soon as practicable

and the initiation of the construction of the defenses as soon as funds may be provided therefor.

UNITED STATES MILITARY ACADEMY.

Since my last report a law has been enacted by Congress increasing the number of cadetships to 1,332. When that law is in full effect four years from now it is anticipated that it will place about 1,200 cadets at the academy. This increase, although spread over a period of four years, makes it imperative that the erection of the necessary buildings to meet the increase should be started at the earliest possible date. It will require two years and perhaps more in some cases to complete the large buildings after they are started. This coming year's increase can be handled with the present plant, but further increases in the number of cadets call for material increase of accommodations. The superintendent of the academy, in his annual report, submits a construction plan calling for an expenditure of approximately \$3,000,000. A board of officers has been appointed to report upon this important matter by December 1.

The growth in size and importance of this institution makes it important, in order to properly maintain the dignity of the position of the superintendent, that he should have the temporary rank of a general officer, whatever his rank may be when detailed to the position. I therefore recommend that the law which now gives him the temporary rank of colonel be changed to give him the temporary rank of brigadier general. The authorized number of cadets at the United States Military Academy, at the time of the passage of the law, June 12, 1858 (sec. 1310, Rev. Stat.), giving the superintendent the grade of colonel, was 282.

INEQUALITIES OF RANK IN MILITARY AND NAVAL SERVICE.

There is every reason that in the military and naval service of the United States there should be such coordination of rank for duty as will not induce invidious comparisons. In both services, where similar interests are involved, they should be considered alike in the enactment of laws. If a superior grade is created for one service, a similar grade should be created for the other, so that all the officers of one service will be on a footing of official equality with officers holding similar commands in the other service and in the services of the world. Otherwise embarrassment results when the two branches are brought in contact with each other and with officers of foreign services. If in all those joint matters in which the Army and Navy are concerned, the Navy, by reason of the possession of superior grades is entitled to outrank the Army, it is easy to see that the Army will, perforce, be looked upon as a subordinate branch.

The act of March 4, 1915, provided the grade of admiral for the commander in chief of the United States Atlantic Fleet, the commander in chief of the United States Pacific Fleet, and the commander in chief of the United States Asiatic Fleet. The second in command of these fleets was given the rank of vice admiral. These grades correspond to the grades of general and lieutenant general in our service. The duties of a fleet commander may properly be

compared to those of the commander of a tactical division, of a department, of the commander of the land forces of the United States in the Philippine Islands, the Hawaiian Islands, and the Panama Canal Zone. These officers of the Navy are given this rank only during the performance of duty and then return to the lower grade of rear admiral, of which there are 24 on the active list of the Navy. The Navy has no grade corresponding to that of brigadier general in our service, which grade has also disappeared from nearly all the armies of the world. The chiefs of bureaus of the Navy Department are thus superior to all bureau chiefs of the War Department except the two who received the favor of special laws giving them increased rank. The result is that most bureau chiefs of the War Department and all brigadier generals of the line are junior in grade to officers of the Navy performing corresponding duty. An adjustment by Congress of these differences and distinctions and doing away with the grade of brigadier general would materially benefit the efficiency of the military service.

The naval appropriation act for the current fiscal year, approved August 29, 1916, provides for a Chief of Naval Operations, who under the terms of the act shall have the rank and title of admiral, to take rank next after the Admiral of the Navy (Admiral Dewey). The Chief of Naval Operations under the new naval law has duties corresponding to those of the Chief of Staff of the Army, and he is given two grades of rank above the Chief of Staff of the Army. The scope of his authority may be seen from the following extract from the law:

All orders issued by the Chief of Naval Operations in performing the duties assigned him shall be performed under the authority of the Secretary of the Navy, and his orders shall be considered as emanating from the Secretary of the Navy and shall have full force and effect as such.

A similar law covering the functions of the Chief of Staff would solve many questions and relieve the Secretary of War from the necessity of giving his personal attention to many small details of administration which now take up his time.

In this connection attention is invited to the following provision in the same act:

That officers of the Marine Corps with the rank of colonel who shall have served faithfully for forty-five years on the active list shall, when retired, have the rank of brigadier general; and such officers who shall hereafter be retired at the age of sixty-four years, before having served for forty-five years, but who shall have served faithfully on the active list until retired, shall, on the completion of forty years from their entry in the naval service, have the rank of brigadier general.

A similar provision for officers of the Regular Army would be very appropriate, otherwise the Army becomes the object of comparison with what may seem to be the more favored branch of Congress.

DELAYS IN PRINTING.

The War Department has experienced frequent and embarrassing delays in obtaining from the Government Printing Office blank forms for use of the Army under ordinary circumstances, and this embarrassment has been greatly increased by the many delays which

occurred in obtaining blanks for use of the National Guard while in the service of the United States.

The delay in printing orders and bulletins is the same as that experienced in the printing of the blank forms, and it is probable that the pressure of work at the Government Printing Office is such that prompt delivery of the department's printing can not be made. This is especially so while Congress is in session, during which time the congressional work takes precedence of all others. The Public Printer has been uniformly courteous and obliging and has put forth special efforts to meet the needs of the department, and the heads of his several departments have cooperated to the full extent of their ability.

It is recommended that an effort be made to have the present branch printing office materially enlarged so that it will be able to handle the printing of practically all the orders, bulletins, and changes and all of the smaller blank forms that are printed by the department.

To accomplish this it will be necessary to provide much more commodious quarters than it is believed can be provided in the State, War, and Navy Building. Ample provision in the way of space for an office large enough to do the work referred to may be had by removing the office to the building at 1725 F Street NW., which belongs to the War Department, and is now occupied by a branch of the Insular Bureau. Some years ago the War Department branch printing office was located in this building and at that time printed all the desertion circulars and the Army List and Directory, so that there can be no doubt that it would be ample for the purpose indicated.

CENSORSHIP OF INFORMATION IN TIME OF PEACE.

In my report of last year I invited attention to the importance of devising some legal plan for a censorship during time of war. It is reasonable to expect that if the public peace is in jeopardy or our relations with another power become strained, most editors and press associations would refrain from publishing information concerning our troops and material which would be of advantage to the enemy. On the other hand, the press must supply the public with news, and much information will be given out which will interfere with plans for national defense or the preservation of peace within our country. This matter has during the year been very fully considered by the General Staff, by the Judge Advocate General of the Army, and by the Joint Board of Army and Navy officers. As a result of this consideration the view was held that so long as the freedom of speech and press do not permit publications injurious to the public or private morals, there has never been a right to publish matter endangering the safety of the country. In order to give full sanction to this, the passage of a law was recommended to the chairmen of the Judiciary Committees of the Senate and House of Representatives, but no action was taken at the last session of Congress. In order to invite full discussion of this proposed measure, and in the hope that thereby action may be hastened in Congress, the proposed draft is given herewith, as follows:

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That whenever in his judgment the

defense of the country or the preservation of the public peace requires such action, the President may issue a proclamation prohibiting the publication of any or all information, facts, rumors, or speculations referring to the armed forces of the Government, materials or implements of war, or the means and measures that may be contemplated for the defense of the country, except when such publication shall have been duly authorized, and he may issue such regulations as may be necessary to render such prohibition effective.

SEC. 2. That after the President shall have issued such proclamation as is authorized by section one of this act it shall be unlawful for any person or corporation, or any officer, director, or agent of a corporation, in his capacity as such, within the jurisdiction of the United States to publish, or cause or procure or willingly or through negligence permit to be published, or to assist in the publication of any information, facts, rumors, or speculations prohibited by the terms of the proclamation or regulations issued under this act, except when such publication shall have been duly authorized under such regulations, and any person who so offends may be punished by a fine of not more than ten thousand dollars or by a term of imprisonment of not more than three years, or both. Any corporation which so offends shall be punished by a fine of not more than twenty thousand dollars; and any officer, director, or agent of any corporation who shall consent to, connive at, or through negligence permit any violation of the provisions of this act by such corporation or by any of its agents or agencies shall be punished by a fine of not more than ten thousand dollars or by a term of imprisonment of not more than three years, or both.

SEC. 3. That when, in the judgment of the President, the defense of the country or the preservation of the public peace no longer requires prohibition of publication, he shall issue a proclamation revoking any proclamation issued under section 1 of this act, and thereafter the pains and penalties authorized by this act, except for violations thereof committed prior to such revocation, shall not be effective until a further proclamation is issued under authority of this act.

MOBILIZATION OF INDUSTRIES.

Section 120 of the national defense act of June 3, 1916, provides that the Secretary of War shall make, or cause to be made, a complete list of all privately owned plants in the United States equipped to manufacture arms and ammunition or the component parts thereof.

The President is authorized, in his discretion, to appoint a Board on Mobilization of Industries essential for military preparedness, nonpartisan in character, and to take all necessary steps to provide for such clerical assistance as may be deemed necessary to organize and coordinate the work.

Section 121 of the same act authorizes the Secretary of War to appoint a board of five citizens, two of whom shall be civilians and three of whom shall be officers of the Army, to investigate and report to him the feasibility, the desirability, and practicability of the Government manufacturing arms and munitions and equipment. The Secretary of War is directed to transmit the report of this committee to Congress on or before January 1, 1917.

The Naval Consulting Board has prepared extensive lists of manufacturing concerns and privately owned plants. Army officers have cooperated with the Naval Consulting Board in preparation of these lists. Inventories of some 20,000 concerns are now being arranged in the office of the Naval Consulting Board. When completed, copies of these lists are to be furnished the War Department.

The investigation required as to the Government manufacture of arms is proceeding through the office of the Chief of Ordnance. This investigation has been delayed on account of the great rush of work due to the calling of the militia into the Federal service and increase

of the Regular Army. The committee will be appointed and the report rendered on January 1, 1917, as required.

I have omitted from this report statistics usually embodied concerning the authorized and actual strength of the military establishment, geographical distribution of troops, and information of detached officers and other incidental details, as these matters are fully covered in other reports.

Attention is invited to reports of department commanders and to the reports of chiefs of bureaus and corps of the War Department as containing interesting detailed information of their respective responsibilities.

H. L. SCOTT,
Major General, Chief of Staff.

To the SECRETARY OF WAR.

APPENDIX.

WAR DEPARTMENT,
OFFICE OF THE CHIEF OF STAFF,
WAR COLLEGE DIVISION,
Washington, September 11, 1915.

Memorandum for the Chief of Staff:
Subject: Military policy.

1. Memorandums from your office, dated March 11 and March 17, 1915, directed the War College Division to make a complete and exhaustive study of a proper military policy for the United States, and to prepare a clearly and succinctly expressed statement of the policy, basing it, in a general way, upon the "Report on the Organization of the Land Forces of the United States, 1912," "eliminating everything that is not necessary for the easy and quick comprehension of the military policy, and adding anything which may be necessary to afford such comprehension."

2. The following extract from the memorandum of March 17, 1915, gives the subjects which the "statement" was to cover, viz:

The substance of this policy will, therefore, be a clearly and succinctly expressed statement, with the reasons therefor, of the recommended *strength* and *organization* of—

- I. (a) The Regular Army;
- (b) The Organized Militia.

This should be followed by—

II. A careful study of the question of a reserve for both the Regular Army and the Organized Militia and, *if possible to agree upon it*, a plan for the formation of such reserves.

III. The Volunteers: Their organization and relation to the Regular Army and the Organized Militia.

IV. Reserve material and supplies which should be available and which can not be promptly obtained if delayed till the outbreak of war.

The Secretary of War is of the opinion that a statement which shall contain everything that is pertinent to the foregoing subjects will inform Congress of all the *essential* things that the best judgment of the War Department thinks it is justified in asking Congress to provide in peace and to be prepared to provide in war. These things, being such as commend themselves to the general military intelligence (if they do not so commend themselves there can be no policy such as is now aimed at), may be assumed to be those that will be asked for by succeeding administrations of the War Department—at least, they will indicate the general line of development to be pursued. Such a statement will constitute what he has in mind as a comprehensive military policy.

There are many other things that will from time to time be asked of Congress or, when authority exists for it, that will be done without asking legislation. Such things may be requests for appropriations to build new posts in view of the abandoning of others; the concentration of the Army in a smaller number of posts in definite areas of the country; projects for promotion, retirement, etc.; plans for training the Army and the militia, etc.

Such things have no part in the statement of a general military policy which the Secretary of War now desires to have prepared, and in order to save time and labor and to concentrate attention upon that which is essential, he desires any such extraneous matter to be eliminated from the study which he has directed.

3. Following these lines the accompanying "Statement of a Proper Military Policy for the United States" was prepared.

4. It is proposed to supplement this statement later with brochures on such subjects as require more detailed discussion than would be appropriate herein.

M. M. MACOMB,
Brigadier General, Chief of War College Division.

A PROPER MILITARY POLICY FOR THE UNITED STATES.

INTRODUCTION.

THE MILITARY PROBLEM CONFRONTING THE UNITED STATES.

1. *The evolution of national military policies.*—National policies are evolved and are expanded as the Nation grows. They reflect the national sense of responsibility and also the national ambitions. They constitute the doctrine underlying acts of statesmanship and diplomacy. A nation's military policy is the national doctrine of self-preservation. The world is never without virile, capable, and progressive nations, the circumstances of whose development have imbued them with the belief that their vital interests demand an active aggressive policy. They are forced to resort to universal service in the effort to fulfill, at any cost, what they conceive to be their destiny. In the United States the development of the Nation has proceeded under an environment so favorable that there is no well-defined public opinion in regard to what constitutes an adequate military policy. Heretofore isolation, combined with the necessity of preserving the balance of power, has been a sufficient guaranty against strong hostile expeditions from Europe or Asia. The safeguard of isolation no longer exists. The oceans, once barriers, are now easy avenues of approach by reason of the number, speed, and carrying capacity of ocean-going vessels. The increasing radii of action of the submarine, the aeroplane, and wireless telegraphy all supplement ocean transport in placing both our Atlantic and Pacific coasts within the sphere of hostile activities of oversea nations.

The great mass of the public does not yet realize the effect of these changed conditions upon our scheme of defense.

Another thing that militates against the evolution of a sound military policy for our country is the erroneous conclusion drawn by the people from our past experiences in war. In developing such a policy victory is often a less trustworthy guide than defeat. We have been plunged into many wars and have ultimately emerged successfully from each of them. The general public points to these experiences as an indication that our military policy has been and still continues to be sound. That this is not really the belief of those in authority is shown by the fact that each war of importance has been followed by an official investigation of our military system and the policy under which it operated. The reports of these investigations give a startling picture of faulty leadership, needless waste of lives and property, costly overhead charges augmented by payment of bounties to keep up voluntary enlistments, undue prolongations of all these wars, and finally reckless expenditure of public funds for continuing pensions. These documents supply convincing proofs that all such shortcomings have been due entirely to a lack of adequate preparation for war in time of peace. But we have not yet

learned our lesson. It has never been driven home by the bitterness of defeat. We have never known a Jena or a Sedan. At no stage of our national life have we been brought face to face with the armed strength of a great world power free to land sufficient forces to gain a foothold at any desired portion of our coasts. That we have to some extent felt this danger is evidenced by our efforts to provide a navy as a first line of defense and to supplement it with the necessary harbor fortifications; but we have not yet realized that our ultimate safeguard is an adequate and well-organized mobile land force. Experience in war has shown the need of these three elements, but the public has not yet demanded that they be perfected, coordinated, and combined in one harmonious system of national defense. *Not until this has been accomplished will a proper military policy for the United States be adopted.*

2. *Our abiding national policies.*—The majority of our people have always believed in asserting their own rights and in respecting those of others. They desire that the cause of right should prevail and that lawlessness should be crushed out. To live up to these high ideals imposes upon us new duties as a world power; duties that require something more positive than a policy of mere passive defense. In addition, there are two underlying and abiding national policies whose maintenance we must consider as necessary to our national life. These are the "Monroe doctrine" and the policy of avoiding "entangling alliances." They are distinctive and affect our international relations in a definite manner. In addition, policies may develop in the future as a result of international relations with respect to trade conditions.

A general consideration of our responsibilities as a nation and of our geographical position indicates that the maintenance of our abiding policies and interests at home and abroad involves problems of defense measures both on land and on sea. The solution of the general problem of national defense must be sought in the provision of adequate land and sea forces and a consideration of their coordinate relationship.

3. *Coordinate relationship of Army and Navy.*—Upon the Navy devolves the solution of the problem of securing and maintaining control of the sea. To accomplish this it must be free to take the offensive promptly—that is, to seek out and defeat the enemy fleet. The use of any part of the high-sea fleet for local defense defeats the chief object of the Navy and is a misuse of naval power. A fleet defeated at sea and undefended by an adequate army is powerless either to prevent invasion or even its own ultimate destruction by combined hostile land and naval forces. In illustration compare the cases of the Spanish fleet at Santiago and the Russian fleet at Port Arthur with the present example of the German, Austrian, and Turkish fleets under the protection of land forces.

Upon the Army devolves the task of gaining and maintaining on shore the ascendancy over hostile land and naval operations. To accomplish this it must be able to seek out promptly and to defeat, capture, or destroy the invader wherever he may attempt either to secure a footing upon our territory or to enter the waters of our harbors with the object of threatening the destruction of the seaport or of a fleet driven to seek refuge or repair therein.

The problems involved in operations against hostile land forces are complex and include only as an incident the protection of harbor defenses on the land side. The problems of harbor defense against attack from the sea are simple and passive in their nature.

4. *Coordinate relationship of statesman and soldier.*—In our country public opinion estimates the situation, statecraft shapes the policy, while the duty of executing it devolves upon the military and naval departments.

Such a doctrine is sound in direct proportion to its success in producing a military system capable of developing fighting power sufficient to meet any given national emergency, at the proper time, supported by all the resources, technical and economic, of the country, in a word—preparedness. All the other world powers of to-day have realized the necessity of maintaining highly trained and organized military and naval forces in time of peace, and all, or nearly all, are allied in powerful coalitions.

Without superiority on the sea or an adequate land force there is nothing to prevent any hostile power or coalition of powers from landing on our shores such part of its trained and disciplined troops as its available transports can carry. The time required is limited only by the average speed of its vessels and the delay necessarily consumed in embarking and disembarking.

In order that the American people can intelligently decide on a doctrine of preparedness which shall constitute the military policy of the United States, and that Congress and the Executive may be able to carry out their decision, information concerning the military strength of other great nations and shipping available for transport purposes must be clearly set forth.

The work of the statesman and of the soldier and sailor are therefore coordinate; where the first leaves off the others take hold.

5. *Preparedness of the world powers for over-sea expeditions.*—Control of the sea having been once gained by our adversary or adversaries, there is nothing to prevent them from dispatching an over-sea expedition against us. In order to form an idea of the mobile force we should have ready to resist it an estimate must first be made of the approximate number of troops that other nations might reasonably be expected to transport and of the time required to land them on our coasts.

The number of thoroughly trained and organized troops an enemy can bring in the first and succeeding expeditions under such an assumption is a function of—

- (a) The size of the enemy's army, and
- (b) The number, size, and speed of the vessels of the enemy's merchant marine that can be used as transports.

Should our enemy be a nation in arms—that is, one in which all or nearly all of the male inhabitants of suitable physique are given a minimum of two years' training with the colors in time of peace (and this is true of all world powers except ourselves and England), it is evident that the size of the first expedition and succeeding expeditions would be limited only by the number of vessels in the transport fleets. It also follows that as the capacity and number of steamers in the merchant marine of any nation or group of nations increase in the future, the number of trained soldiers which such nation could send

in such expedition will also increase, and our trained forces should be correspondingly augmented.

What the conditions were in August, 1914, is shown in the following table, which may be regarded as a reasonable estimate:

Preparedness of the great powers for over-sea expeditions.

Nation.	Strength of army.	Tonnage available of ships with capacity over— ¹			First expedition using 50 per cent of tonnage given.		Second expedition using 75 per cent of tonnage given.		Time needed to—	
		3,000 tons.	2,000 tons.	1,000 tons.	Men.	Animals.	Men.	Animals.	Load and cross ocean with first expedition.	Return, load, and re-cross with second expedition.
Austria-Hungary	4,320,000	.....	762,756	.....	72,000	14,000	108,000	21,600	20.7	40.4
France	5,000,000	.....	1,705,931	.....	160,931	32,186	243,295	48,279	15.8	30.0
Germany	5,000,000	3,569,962	4,018,185	.....	387,000	81,270	440,000	94,600	15.8	30.8
Great Britain	695,000	13,000,000	.....	.....	170,000	90,000	.....	.....	14.0	27.0
Italy	2,600,000	.....	1,065,321	.....	91,000	13,650	136,000	20,475	18.3	35.0
Japan	2,212,000	.....	.....	1,013,985	95,715	24,416	142,622	36,623	22.5	41.0
Russia	5,000,000	.....	421,019	.....	37,630	7,940	66,444	11,918	20.5	40.0

¹ Fifty per cent has been assumed as the figure representing the amount of shipping in or within call of home ports at outbreak of war.

² Using no ships less than 3,000 tons.

³ 240,500 territorials.

⁴ Japanese field regulations indicate the intention to use steamers of 1,000 tons; for this reason and because of the large amount of steamers between 10 and 12 knots speed, all Japanese steamers over 10 knots speed and a thousand tons gross have been considered.

NOTE.—The allowance prescribed in our Field Service Regulations of 3 tons per man and 8 tons per animal for ships over 5,000 tons and 4 tons per man and 10 tons per animal for vessels under 5,000 tons has been used in estimating the capacity of ships, except where the regulations of any country prescribe a different allowance. These allowances include rations, water, forage, etc., for the voyage and a margin for three months' reserve supplies. The tonnage allowance covers men, animals, and all accessories and is sufficient to provide for vehicles (including guns).

Fighting power is the result of organization, training, and equipment backed by the resources of the country. Available shipping is a matter of commercial statistics.

The quality, organization, and efficiency of these troops, except those of Japan, which demonstrated their excellence in the Russo-Japanese War, are now undergoing a supreme test of military strength on land and sea. This test by the ordeal of battle is visibly demonstrating their organization, their fighting power, and the rate at which each is capable of developing and maintaining its military strength. In addition, where certain nations have transported troops by sea their capabilities in this respect have to some extent been shown.

This evidence, produced under conditions of actual warfare, presents an example of the resultant efficiency of any nation that has developed a sound military policy; the soundest policy being the one which insures a successful termination of the war in the shortest time.

6. *Statement of the military problem.*—From what has been stated, we are forced to the conclusion that we must be prepared to resist a combined land and sea operation of formidable strength. Our principal coast cities and important harbors have already been protected by harbor defenses which, by passive method alone, can deny to an enemy the use of these localities as bases for such expeditions.

The enemy being unable to gain a foothold in any of these fortified areas by direct naval attack will therefore be forced to find some suitable place on the coast from which land operations can be conducted both against the important coast cities and the rich commercial centers in the interior. Long stretches of coast line between the fortified places lie open to the enemy. The only reasonable way in which these localities can be defended is by providing a mobile land force of sufficient strength, so located that it may be thrown in at threatened points at the proper time.

It has just been shown what the strength of these expeditions might be, as well as the time required for any one of them to develop its whole effective force. Hence it can be seen, when we take into consideration the possible two months' delay provided by the Navy, that our system should be able to furnish 500,000 trained and organized mobile troops at the outbreak of the war and to have at least 500,000 more available within 90 days thereafter. Here, however, it must be pointed out that two expeditions alone will provide a force large enough to cope with our 1,000,000 mobile troops, and consequently we must at the outbreak of hostilities provide the system to raise and train, in addition, as least 500,000 troops to replace the losses and wastage in personnel incident to war. To provide this organized land force is the military problem before us for solution.

I. THE REGULAR ARMY.

GENERAL FUNCTIONS OF THE REGULAR ARMY.

7. In the endeavor to reach a just conclusion as to the strength and organization of a regular army adequate to play its part in our national defense, it must not be forgotten that this defense is a joint problem requiring for its correct solution the united efforts of both Army and Navy, and that the ultimate strength of the greater war army is dependent to a considerable extent upon the part to be played by the fleet. It is therefore assumed in this discussion that the Navy is preparing to place and maintain in the Pacific, when the occasion requires, a force superior to that of any oriental nation, and in the Atlantic one second only to that of the greatest European naval power.

The Regular Army is the peace nucleus of the greater war army of the Nation. Its strength and organization should be determined not only by its relation to the larger force but by its own peace and war functions. It must be prepared at all times to meet sudden and special emergencies, which can not be met by the army of citizen soldiers. Its units must be the models for the organization and training of those of the great war army.

Some of the functions of the Regular Army are:

(a) To furnish the entire strength of our garrisons outside of the United States proper both in peace and war.

(b) To garrison our harbor defenses within the United States proper in time of peace.

(c) To furnish detachments of mobile forces in time of peace sufficient for the protection of these harbor defenses and naval bases against naval raids which, under modern conditions, may precede a declaration of war.

(*d*) To furnish sufficient mobile forces to protect our principal cities by preventing the landing of hostile expeditions for their capture in the intervals between our fortified harbors or near such cities.

(*e*) To supply a mobile reserve to reenforce our garrisons outside of the United States proper during periods of insurrection and disorder.

(*f*) To furnish expeditionary forces for minor wars resulting from the occupation of foreign territory where treaty rights or fundamental national policies may have been threatened.

(*g*) To prepare in advance its existing administrative and supply departments for the equipment, transportation, and supply of the great war army of the Nation.

(*h*) To assist in the training of organizations of citizen soldiers.

8. Concerning the strength and organization of the Regular Army, the following points are to be considered:

(*a*) At the outbreak of war the Regular Army at home should be strong enough, with the addition of organized and trained citizen soldiers, to form the first line of defense in order to give sufficient time to permit the mobilization and concentration of our greater war army, and to seize opportunities for such immediate initial operations as may be undertaken before the mobilization of the army of citizen soldiers can be completed.

(*b*) It should be so organized and located that it can be economically and efficiently trained, quickly and easily mobilized and concentrated, and readily used as a model in the education and training of the citizen forces.

MOBILE AND COAST ARTILLERY TROOPS AND THEIR FUNCTIONS.

9. Experience has shown that our regular land forces and others modeled upon them must consist of two distinct classes, i. e.:

(*a*) Mobile troops.

(*b*) Coast Artillery troops.

These two groups have their own special functions for which they are trained and equipped and from which they should not be diverted except in some emergency.

The function of the Coast Artillery is to man our harbor defenses designed to protect important seaports from direct naval attacks and raids from the sea. The armament and accessories of these forts are intended to be so complete and powerful as not only to prevent hostile landings at all places within range of the guns, but also to cover all navigable waters in the vicinity of great seacoast cities so thoroughly as to leave no dead spaces from which enemy ships, either at anchor or during a run-by, could bring them under bombardment. While these harbor forts are important elements in our scheme of defense, they are, nevertheless, powerless to prevent invasion at points outside the range of their guns. The total length of our coast line is enormous, and the stretches covered by harbor defenses are and must remain very small compared with the unprotected intervals that lie between them. If we should lose command of the sea an invader would simply land in one of these intervals. It therefore follows that the ultimate defense of our coasts depends upon defeating a mobile army of invasion, and this can be done only by having mobile forces prepared to operate in any possible theater of

war. At this stage of hostilities the problem becomes one of cooperation between Coast Artillery and mobile troops, but there can be no fixed relation in the strength of these two classes of land forces. The necessary strength of Coast Artillery troops depends upon the number and character of harbor defenses established; that of mobile troops upon the nature and extent of the defensive and offensive operations for which the Nation decides to be prepared.

RELATION BETWEEN HOME AND OVERSEA GARRISONS.

10. The most rational method of determining the proper strength and organization of the Regular Army is based upon the fact that this force is and must be divided into two distinct parts—one for oversea service, the other for home service. Each of these parts must have its proper quota, both of mobile and Coast Artillery troops.

The troops on oversea service consist of the detachments required to meet the special military problems of the Philippines, Oahu, Panama, Alaska, Guantanamo, and Porto Rico. Each of these detachments has a distinct tactical and strategic mission, and is to operate within a restricted terrain. All of them are limited to oversea communication with the home country, and all of them may therefore be isolated for considerable periods, especially in the critical first stages of war. It is obvious that under these circumstances these detachments should be prepared to meet all military emergencies until reinforcements from the United States can reasonably be expected. They must, therefore, be maintained at all times at full statutory strength, and must, in addition, be organized with the view to being self-supporting, preferably during the continuance of war, or at least until the Navy has accomplished its primary mission of securing the command of the sea.

The force at home is on an entirely different basis. It may or may not be given an adequate number of units in time of peace, but it is supported by all of the resources of the Nation. It may be increased at the pleasure of Congress, and it may be reenforced by considerable forces of citizen soldiery. It follows from these considerations that the Military Establishment of the United States in time of peace should first provide effective and sufficient garrisons for the political and strategic outposts of the United States, and that the residue at home should be organized with the view to ultimate expansion into such war forces as national interests may require. The possibility of a satisfactory mobilization of this home force is dependent upon keeping the units of the regular contingent at full statutory strength.

GENERAL REQUIREMENTS OF OVERSEA SERVICE.

11. *The Philippines.*—A decision to defend the Philippines against a foreign enemy is a matter of national and not of military policy. But in studying the military requirements of such defense it must be remembered that, under conditions of modern warfare, unless our Navy has undisputed control of the sea, we can not reenforce the peace garrison after a declaration of war or while war is imminent.

12. *Oahu.*—The maintenance of the naval base at Pearl Harbor, Oahu, is an essential factor in the military problem of holding the

Hawaiian Islands. These islands constitute a vital element in the defense of the Pacific coast and in securing to ourselves the full value of the Panama Canal as a strategic highway between the two oceans.

The problem of holding the Hawaiian Islands can be solved by making Oahu, and therefore Pearl Harbor, secure against all comers. A satisfactory solution requires the joint action of the Army and Navy. Pearl Harbor and Honolulu are already protected from direct naval attack by fortifications now nearing completion. These, while deemed adequate to meet the conditions existing when they were designed, must now be strengthened to meet the recent increase in power of guns afloat; but no matter how complete these harbor fortifications on the southern coast of Oahu may be, they are unable to prevent attacks either on the remaining hundred miles of coast lying beyond the range of their guns or on the other islands of the group. Consequently there should be in addition a force of modern submarines and destroyers forming part of the permanent naval equipment of Pearl Harbor with sufficient radius of action to keep the Hawaiian waters thoroughly patrolled throughout their whole extent and to make them dangerous for enemy vessels. Should this force be worsted in combat and withdrawn before the arrival of our high-sea fleet, the complete control of the local waters might pass temporarily to the enemy, so that the ultimate security of both Honolulu, the naval base at Pearl Harbor, and indeed of the whole group, depends upon including in the Oahu garrison enough mobile troops to defeat any enemy that may land anywhere on the island. It is clear that perfect coordination between the Army and Navy at this station is absolutely essential to success in holding this key to the Pacific. Unless we provide such dual defense of the Hawaiian Islands we can not be sure of retaining control even of that part of the Pacific lying within the sphere of defense of our western coast. By making such provision the high-sea fleet is left free to seek out the enemy fleet in Pacific waters.

13. *Panama.*—The Panama Canal is a very important strategic position which it is our duty to hold. By our control of this highway between the two oceans the effectiveness of our fleet and our general military power is enormously increased. It is therefore obvious that the unquestioned security of the canal is for us a vital military need. The permanent garrison should be strong enough to guard the locks, spillways, and other important works and to prevent a naval attack which, under modern conditions, may even precede a declaration of war. We should therefore be able, even in peace, to man the seacoast guns and mine defense that cover the approach to the canal, and we must have enough mobile troops to defeat raids. A modern fleet might land a small raiding party of several thousand bluejackets at any one or more of a number of places, and such a force landing out of range of the seacoast guns could, if unopposed, penetrate to some vulnerable part of the canal within a few hours. The permanent garrison should therefore include a mobile force strong enough to anticipate and defeat naval raids at the beginning of hostilities and to protect the canal against more serious land operations liable to be undertaken later. If the enemy is operating on one ocean only, it might be possible to send reinforcements from the United States, but to count on such relief would be running too great chances. By au-

thority of the Republic of Panama, this garrison is given facilities in time of peace to operate beyond the Canal Zone in order that the troops may be properly trained for their special mission and made familiar with the terrain over which they may be called upon to operate in defending the canal.

14. *Guantanamo*.—The policy of the United States contemplates the establishment of a naval base at Guantanamo. Garrisons of coast artillery and mobile troops are necessary for its defense and should be assigned to station there at the proper time.

15. *Alaska*.—The garrison of Alaska should be large enough to support the authority of the United States, and, in time of war, to maintain our sovereignty over a small selected area of the Territory. As work on the Alaskan Railroad progresses, the military needs of Alaska will increase.

16. *Porto Rico* is to be classified with the Philippines and Guam. Unlike Alaska and Hawaii, these island possessions have not been organized as Territories; nevertheless, they all belong to the United States and must be protected.

GENERAL REQUIREMENTS OF HOME SERVICE.

17. *General distribution of Coast Artillery troops in fortified areas*.—It has already been shown where we should have garrisons for oversea service and why. It now remains to show how we should distribute our regular troops for service at home. Coast Artillery stations should correspond to the fortified areas on the seacoast, and these are indicated by the position of the harbor defenses, which are at present located as follows:

Portland, Me.	The Potomac.	New Orleans.
Portsmouth, N. H.	Chesapeake Bay.	Galveston.
Boston.	Cape Fear.	San Diego.
New Bedford.	Charleston.	Los Angeles.
Narragansett Bay.	Savannah.	San Francisco.
Long Island Sound.	Tampa.	Puget Sound.
New York.	Key West.	The Columbia.
The Delaware.	Pensacola.	
Baltimore.	Mobile.	

18. *General distribution of mobile troops in strategic areas*.—As previously explained, the influence of harbor defenses is limited to the areas within the range of their guns. To provide harbor defenses without mobile forces necessary to cover the unprotected intervals that lie between them would be comparable with attempting to make a house burglar proof by barring the doors and leaving the windows open. There is not a case in history where seacoast fortifications, efficiently manned, have been captured by direct attack from the sea. In all cases of capture mobile land forces have been employed for the purpose, and an enemy that hopes for success must undertake landing operations against us. We must therefore decide upon a rational distribution of our mobile forces to meet this contingency.

19. *Puget Sound area*.—Western Washington is bordered on the east by the steep and rugged Cascade Mountains, on the south by the Columbia River, and on the north by Juan de Fuca Strait and Canada. This corner of the United States is completely cut off from the rest of the country by great natural obstacles and presents an

extensive front for attack by sea. While the maps show some twenty passes across the Cascade Mountains, communication with the east is almost entirely by three railroads, all crossing at points less than 50 miles apart and having tunnels or other vulnerable structures. The only practicable wagon road is effectually closed to traffic for between four and five months each year by heavy snows. Communication with the south is by one line of railroad, crossing the Columbia River by bridge at Vancouver. Communication between this section and the east and south is thus largely dependent upon a number of structures readily destroyed by high explosives, and impossible of restoration to traffic within a definite time. The two railroads along the Columbia River, at the point where it breaks through the mountains, could be easily wrecked so as to require considerable time to repair, and the gorge could be held by a small force against a large one coming from the east. If an enemy succeeds in entering western Washington and in seizing and destroying the important bridges and tunnels, he would be so securely established as to render it extremely difficult to dislodge him. In this rich region an invader could maintain himself indefinitely. The harbor defenses maintained in this region are reasonably strong. Ordinary precaution demands that a mobile force of reasonable strength be also maintained in this region.

20. *California area.*—There are five transcontinental lines of railway entering California. The Western Pacific and Southern Pacific by the passes through the Sierras northeast of Sacramento; the Atchison, Topeka & Santa Fe, and the San Pedro, Los Angeles & Salt Lake via Daggetts Pass northeast of Los Angeles; and the Southern Pacific via the Salton Sea and Gorgonia Pass southeast of Los Angeles. There are no other passes through the Sierras that have been considered practicable. There is no railroad running south into Lower California. Only one railroad, the Southern Pacific, runs north into Oregon. As in the Puget Sound region, communication with the east is largely dependent upon structures readily destroyed by explosives and impossible of restoration to traffic within a definite time; California and the greater centers of population are separated by wide expanses of sparsely settled country. To transport promptly large bodies of troops into California would be difficult if not impossible in face of opposition at the passes. The invader would have a most fertile region at his back, while the reverse would be the situation with us.

The harbor defenses maintained in this region are reasonably strong, but they are of little use unless supported by a reasonably strong mobile force maintained in this region.

To rely, for defense, during the first stages of a war upon a mobile force shipped in from the east is to invite disaster.

21. *Atlantic area.*—In case of war with a first-class power on the Atlantic, that portion of our country lying between and including Maine and Virginia would undoubtedly be the primary object of an invader. While all other points along the Atlantic and Gulf coasts and all points on our land frontiers would undoubtedly be in danger, the danger would be secondary to that of the North Atlantic States above named. Here also the harbor defenses are reasonably strong, and here also a mobile force should be kept sufficient in size to hold important points until the citizen soldiery can be mobilized.

While many other regions are important, the three regions described—Puget Sound, California, and the North Atlantic States—contain the critical areas.

22. *Middle West area*.—The center of population of the United States is in the Middle West, and here should be located a mobile force for use in case of need on either the Pacific or Atlantic coast, the northern or southern border.

NECESSARY STRENGTH OF MOBILE TROOPS FOR OVER-SEA SERVICE.

23. Constant study of the problem which confronts each of our oversea garrisons in connection with the advance made in arms, transportation, tactics, lines of information, methods of communications, undersea craft, and aerial operations has led to the conclusions that the strength of the over-sea garrisons herein given is the minimum, below which they should not be allowed to fall at any time.

The general requirements of over-sea service have already been stated for each of the several localities concerned. It now remains to determine the necessary strength to meet these requirements, taking up each case in turn.

24. *The Philippines*.—If in accordance with national policy it is decided to keep the American flag flying in the Philippines, in war as in peace, it becomes essential to hold Manila Bay.

25. *Oahu*.—Having in mind the principles governing the relations between home and over-sea garrisons, the force maintained at all times in Oahu should include:

- 9 regiments of Infantry (3 brigades).
- 1 regiment of Cavalry.
- 2 regiments of Field Artillery.
- 2 battalions Engineers; 1 field battalion of Signal troops; 1 aero squadron; 1 telegraph company.
- 2 ambulance companies.
- 14 companies Coast Artillery.

This force will total about 25,000 combatant officers and men.

26. *Panama*.—The force maintained at all times in the Canal Zone should include:

- 9 regiments of Infantry (3 brigades).
- 1 regiment of Cavalry.
- 1 regiment of Field Artillery.
- 2 battalions Engineers; 1 field battalion of Signal troops; 1 aero squadron; 1 telegraph company.
- 1 ambulance company; 1 evacuation hospital.
- 21 companies Coast Artillery Corps.

This force will total about 24,000 combatant officers and men.

27. *Guantanamo*.—The policy of the United States contemplates the establishment of a naval base at Guantanamo. Garrisons of Coast Artillery and mobile troops are necessary for its defense and should be assigned to station there at the proper time.

28. *Alaska*.—The garrison of Alaska should be large enough to support the authority of the United States and in time of war to maintain our sovereignty over a small selected area of the Territory. As work on the Alaskan Railroad progresses the military needs of Alaska will increase.

In time of peace it is believed that the Alaskan garrison should be one regiment of Infantry (1,915 officers and men), to be increased later as circumstances may demand.

29. *Porto Rico*.—The present garrison, reorganized into a full regiment of three battalions, etc., is sufficient (1,915 officers and men).

30. The following table gives a summary of the minimum garrison to be maintained on over-sea service:

Table of garrisons for over-sea stations.

Localities.	Regiments of Infantry	Regiments of Cavalry.	Batteries of Field Artillery.	Battalions of Engineers.	Battalions, Signal Corps. ¹	Aero squad-	Companies of Coast Artillery Corps.
Philippines.....	2	3	18	11½	1½	1	26
Oahu.....	9	1	12	2	1½	1	14
Panama.....	9	1	6	2	1½	1	21
Alaska.....	1						
Porto Rico.....	1						
Total.....	20	5	36	5½	4½	4	61

¹ Includes 1 telegraph company in each garrison.

² 1 company mounted for Cavalry brigade.

³ Native.

Combatants—	Officers and men.
Mobile.....	74,500
Coast Artillery Corps.....	7,500
Total.....	82,000

NECESSARY STRENGTH OF MOBILE TROOPS FOR HOME SERVICE.

31. Careful studies made at the War College, extending over a period of years, lead to the conclusion that the strength of the Infantry, Cavalry, Field Artillery, Engineers, and signal troops of the Regular Army maintained at home in time of peace, and the distribution of administrative units of these arms in the principal strategic areas, should be as given in the following table:

Combatant troops.

Localities.	Infantry regiment.	Cavalry regiment.	Field Artillery regiment.	Engineer battalions.	Battalions, Signal Corps.	Aero squadrons.
Puget Sound area.....	9	3	13½	2½	1½	1
California.....	9	4	3½	2½	1½	1
North Atlantic States.....	9	4	3½	2½	1½	1
Middle West.....	9	3	3½	2½	1½	1
Mexican border.....		6	1		1	1
Total.....	36	20	15	10	7	5

attalion horse artillery; 1 company mounted Engineers; 1 company and men.

be organized in higher tactical units and distributed substantially as follows:

division (less divisional Cavalry) and one Cavalry brigade (of 3 regiments).

division and one Cavalry brigade.

division and one Cavalry brigade.

division (less divisional Cavalry) and one Cavalry brigade.

Cavalry brigade.

Cavalry brigade.

NECESSARY STRENGTH OF COAST ARTILLERY TROOPS REQUIRED FOR SERVICE OVERSEAS AND AT HOME.

32. The strength of the Coast Artillery depends upon the number of guns and mine fields installed and projected and upon the assistance to be received from Organized Militia units. An estimate prepared in the Office of the Chief of Coast Artillery¹ gives the following strength, in companies, required under the supposition that all mine fields and all oversea guns and one-half the guns at home are manned from the Regular Army:

	Companies.
Philippines-----	26
Oahu-----	14
Panama-----	21
United States-----	228
Total-----	289
Total companies (gun and mine)-----	289
Officers and men-----	34, 418

TOTAL STRENGTH OF THE REGULAR TROOPS REQUIRED FOR ALL SERVICES.

33. Combining all previous estimates of Coast Artillery and mobile troops required for service in oversea garrisons and at home, the following tabular statement of the required strength of the Regular Army in units appropriate to each arm, results, viz:

Localities.	Infantry regiments.	Cavalry regiments.	Field Artillery regiments.	Coast Artillery companies.	Engineer battalions.	Signal Corps.	
						Battalions.	Aero squads.
Philippines ¹	9	3	3	26	1½	1½	1
Oahu.....	9	1	2	14	2	1½	1
Canal Zone.....	9	1	1	21	2	1½	1
Alaska.....	1						
Porto Rico.....	1						
Puget Sound area.....	9	3	3½		2½	1½	1
California.....	9	4	3½		2½	1½	1
North Atlantic States.....	9	4	3½		2½	1½	1
Middle West.....	9	3	3½		2½	1½	1
Mexican border.....		6	1		1	1	1
United States.....				228			
Total required.....	65	25	21	289	15½	11½	8

¹ This estimate can only be verified by an inspection of all the harbors in question, for which inspection there has not been sufficient time since this estimate was received.
² Nine regiments Infantry, 2 regiments Field Artillery, 2 battalions Engineers. Filipinos to be added, 21,000 officers and men.

These figures may be summarized as follows:

Oversea :		
Mobile (combatant)-----	74, 500	
Coast Artillery Corps-----	7, 500	
		82, 000
In United States :		
Mobile (combatant)-----	121, 000	
Coast Artillery Corps-----	27, 000	
		148, 000
Total :		
Mobile (combatant)-----	195, 500	
Coast Artillery Corps-----	34, 500	
		230, 000

To this total should be added officers and men for the Sanitary, Quartermaster, Ordnance Department, etc., appropriate to a force of this strength, amounting approximately to 30,000 officers and men. Including Philippine Scouts, 21,000, the grand total becomes 281,000.

34. *Organization.*—The Tables of Organization, approved and published on February 25, 1914, for the information and government of the Regular Army and Organized Militia of the United States have been taken as the guide in estimating the numerical strength of the personnel of the various tactical and administrative units mentioned in this report. This was done as a matter of convenience and because the service generally is familiar with these tables, which are the latest official publication of the War Department on this subject. They conform to the Field Service Regulations and are the best that can be devised under the limitation of the present laws governing the Army, but it can not be too emphatically stated that *they are for emergency use only* and contain certain undesirable and unscientific features which should be corrected as soon as the necessary legislation can be obtained. For example, the war organization shown in the tables is *provisional* only, while the peace strength is arranged so as not to exceed the total enlisted strength of about 93,000 men now permitted by existing appropriations.

This limitation falls heaviest upon the Infantry, whose organizations on home service are maintained at only 43 per cent of full statutory strength, while the Cavalry organizations are maintained at 75 per cent and those of Field Artillery at 77 per cent of such strength. It is generally conceded that our Infantry companies should each have the full statutory strength of 150 men in order to permit proper training of the officers in time of peace and supply efficient fighting strength in time of war.

In consequence of the greatly reduced strength of these Infantry organizations, their efficiency is unduly decreased and overhead charges correspondingly increased.

The requirements of modern war demand that a machine-gun unit, a supply unit, and certain mounted men be attached to each regiment, and that units of various strengths be assigned to brigade and division headquarters. None of these units is unauthorized by law, yet all are essential. Tables of Organization, 1914, represent an effort to adapt an archaic statutory organization to modern requirements by organizing the necessary additional units, *provisionally*. This has been done by detaching from statutory organizations the personnel required. An examination of the tables will show that more than 5 per cent of the Infantry personnel authorized by Congress have been diverted from their legitimate duty as members of statutory organizations and have been assigned to provisional units which, while necessary and essential, have only the sanction of departmental authority, and lack the efficiency which can only be given by statute. In the Cavalry more than 9 per cent are similarly diverted.

Recognizing these facts, the War College Division of the General Staff has prepared a plan for organizing on modern lines an army of the strength just shown to be necessary for the national needs. Should this plan be approved, the organization of the Regular Army, the militia, and whatever reserves are formed would proceed along the new lines.

II. THE ORGANIZED MILITIA.

35. The act of Congress approved April 25, 1914, commonly known as the volunteer law, defines the land forces of the United States as "the Regular Army, the organized land militia while in the service of the United States, and such volunteer forces as Congress may authorize."

The Organized Militia, in addition to its use as a State force, is available for use by the Federal Government, as provided in the Constitution.

36. *Constitutional functions of the Organized Militia.*—Its constitutional functions are the following:

(a) A State force to preserve order within the State limits, in order to avoid calling upon the Regular Army or the Organized Militia of other States to discharge such function.

(b) A Federal force when called forth by the President, and duly mustered as prescribed by Congress, for any of the three purposes authorized by the Constitution.

37. *Some uses of the Organized Militia as a Federal force.*—Having been called forth as militia, they may be used as follows:

(a) As Coast Artillery supports and reserves.

(b) To guard and protect certain bridges, canal locks, arsenals, depots of supplies, docks, navy yards, and other vulnerable points in the home territory.

(c) To guard lines of communication within the limits of the United States.

38. *Limitations.*—It is stated later in this report that 12 months, at 150 hours per month, "is considered the minimum length of time of actual training considered necessary to prepare troops for war service." Due to constitutional limitations, Congress has not the power to fix and require such an amount of training for the Organized Militia. No force can be considered a portion of our first line whose control and training is so little subject to Federal authority in peace. No force should be considered a portion of our first line in war unless it be maintained fully organized and equipped in peace at practically war strength. This would exclude the Organized Militia from consideration for service in the first line mainly because of the impossibility of giving it in peace the training required for such function. It may be necessary to continue Federal support of the Organized Militia in order that some organized force may be immediately available for the purposes set forth in paragraphs 36 and 37.

39. *Recommendations.*—In the preparation of plans for the national defense and for the preservation of the honor and dignity of the United States, the number of troops that are deemed necessary are largely in excess of the total regular and militia forces available in the United States.

It is only during the existence of war, or when war is imminent, that any other forces may be raised under existing law. When Congress so authorizes the President, he may call forth volunteers.

Section 3 of the volunteer law provides that under certain conditions organizations of the Organized Militia may be received into the volunteer service in advance of any other organizations of the same arm or class from the same State, Territory, or District; and

section 4 of the act of May 27, 1908, amending the militia law, provides that the militia shall be called into the service in advance of any volunteer force that may be raised.

It is evident that it can not be known prior to the existence of the imminence of war what organizations, if any, of the Organized Militia will enter the volunteer service, and that no definite plans can be prepared providing for the use of such organizations, either as militia or as volunteers, until war is actually upon us.

No legislation affecting the Organized Militia is recommended beyond the repeal of all provisions of laws now in effect whereby militia or militia organizations may or must be received into the Federal service in advance of any other forces.

This recommendation is not to be construed as advocating express repeal of certain sections of existing laws relating to the Organized Militia, but as suggesting that any legislation hereafter proposed for the organization of a Federal reserve force shall contain the usual concluding section repealing all laws and parts of laws inconsistent therewith, and that such legislation be so framed as to render inconsistent with it the provisions of law just referred to.

III. RESERVES.

40. Reserves include: (a) Well-instructed soldiers of the Regular Army furloughed to what is herein termed the regular reserve, (b) citizen soldiers, (c) reserve officers.

41. *The regular reserve.*—As the United States should have a mobile force of 500,000 soldiers available at home at the outbreak of war, the Army, with the regular reserve, should amount to this strength. In order to develop the necessary regular reserve with the Army at the strength advocated in this policy, enlistments would have to be for about eight years—two with the colors and six in reserve. That would, in eight years, result in approximately the following mobile forces at home available at the outbreak of war:

(1) Mobile regular troops (combatant) with the colors.....	121, 000
(2) The regular reserve.....	379, 000
Total.....	500,000

During the first weeks of war in this country the military situation will probably be critical. At that time every fully trained soldier should be put in the field. To do that with the small military establishment herein advocated it is necessary that during peace the Army be kept at war strength, and that the regular reserve be organized and not kept back to replace losses expected during war. Such losses should be replaced from depot units.

42. *Citizen soldiers.*—In addition to the 500,000 fully trained mobile troops mentioned above, at least 500,000 more—a total of 1,000,000 men—should be prepared to take the field immediately on the outbreak of war and should have had sufficient previous military training to enable them to meet a trained enemy within three months. Twelve months' intensive training is the minimum that will prepare troops for war service. Therefore the 500,000 partly trained troops above referred to require nine months' military training before war begins. Military efficiency of reserves requires that Regular Army officers be assigned thereto for training purposes—at least one to

every 400 men—and that organizations and specially designated non-commissioned officers of the Army be utilized in instructing reserves as far as practicable.

Based upon experience with Tables of Organization, 1914, the War College Division has recently prepared a new plan of organization for the Army. The Regular Army and the reserves should be organized according to this plan. Organizations should be formed of men from the districts to which their respective organizations are assigned for recruiting. For this purpose, each organization should be assigned to a district from which recruits most suitable for the service required of the organization may be obtained—mounted units to horse-raising districts, technical troops to manufacturing districts, etc. As a rule the size of districts should be about in proportion to population of the qualifications—age, etc.—required. Organizations in war should be kept at full strength from the depot units which they should have in their respective recruiting districts.

43. *Reserve officers.*—Officers for staff and organizations of reserves, and officers for temporary appointment in the Regular Army as provided for in section 8 of the volunteer law (act of Congress approved Apr. 25, 1914), should be selected and trained in time of peace. The President should be authorized to issue, by and with the advice and consent of the Senate, commissions as reserve officers to citizens of the United States who, upon examination prescribed by the Secretary of War, demonstrate their physical, mental, moral, and professional fitness therefor, and who duly obligate themselves to render military service to the United States while their commissions are valid. Such commissions should be valid five years, and renewable under such regulations regarding examinations and qualifications as the Secretary of War may from time to time prescribe.

IV. VOLUNTEERS.

44. In addition to any forces that may be maintained and trained in time of peace, provision must be made for vastly increasing such forces in time of war. These must come from the untrained body of citizens, and provision for raising them is contained in the act of Congress approved April 25, 1914.

45. This act meets the military needs for raising volunteer troops as far as concerns the enlisted personnel, except in two particulars, which are: First, that under the existing laws certain organizations of the militia, with numbers far below the full strength, can enter the volunteer force in advance of other similar volunteer organizations from the same State; and, second, no volunteers of any arm or branch have been called into the service of the United States. The changes necessary to remedy these defects have been set forth in paragraph 39 under the subject of the Organized Militia.

V. RESERVE MATÉRIEL.

46. Of all the features disclosed by the war in Europe none stands more clearly revealed than the power to be derived from national economic organization behind the armed forces of a nation.

47. In a war of gigantic proportions the chances of success are immeasurably lessened by wastage, abuse, and confusion. Steps should

be taken looking toward a national organization of our economic and industrial resources as well as our resources in fighting men.

48. In its report the commission appointed by the President to investigate the conduct of the War Department in the War with Spain used the following language:

One of the lessons taught by the war is that the country should hereafter be in a better state of preparation for war. Testimony has been taken on this subject and suggestions have been made that large supplies of all the matériel not liable to deterioration should be kept on hand, to be continuously issued and renewed, so that in any emergency they might be available. Especially should this be the case with such supplies, equipment, and ordnance stores as are not in general use in the United States and which can not be rapidly obtained in open market.

49. The lack of such articles as shoes, wagons, harness, rifles, saddles, medical chests, and so on, will render ineffective an army just as certainly as will the lack of ammunition.

50. For the purposes of storage military supplies may be divided into four classes:

(a) Supplies that can be obtained in great quantities in the open market at any time.

(b) Those that can be obtained in sufficient quantities on 15 days' notice.

(c) Those that can be obtained on three months' notice.

(d) Those that can not be obtained within three months.

51. The War College Division of the General Staff is of the opinion that for purposes of defense we should maintain the troops enumerated in Parts I and III of this report.

52. A fully trained force, to be effective during the critical period when war is imminent and during the first few weeks of a war, must not be hampered by lack of necessary supplies and equipment. For this reason, supplies of all kinds which can not be obtained in the open market at any time must be kept on hand, in use and in store, at home and oversea, sufficient to equip without delay all troops whose training warrants sending them promptly into the field.

53. It is probable that as soon as war becomes imminent, the Continental Army—500,000 mobile troops—will also be called out. As this partially trained force can not be expected to take the field within three months' time, it is practicable to refrain, after the third year, from keeping on hand or in store for it any articles of equipment except those necessary to complete its training and those which can not be procured within three months.

54. The total number of harbor-defense troops necessary is about 50,000. Due to conditions of service, it is believed that ultimately supplies of all kinds for 60,000 should be kept on hand.

55. In any great war volunteers must be called out in addition to the troops above enumerated.

56. It would be unwise to have on hand at the beginning of a war merely the supplies sufficient to place in the field our first contingent of troops and to complete the training of the Continental Army, and to be unprepared to supply to even a limited extent the Volunteer Army we should have to raise, not to mention replacements of arms, ammunition, clothing, and equipment of all kinds for those already in the field; but on account of the great sum of money which will be necessary in entering upon a program for collecting and storing mili-

tary supplies it is believed that the subject of equipment for a volunteer army and replacements for the Regular and Continental Armies should be provided for by obtaining options with domestic manufacturers to furnish the required supplies, all of domestic manufacture, in accordance with tentative contracts to be made by the supply departments with such manufacturers in time of peace. By so doing we will be taking the initial steps toward organizing the industrial and economic resources of the country as well as its resources in fighting men.

57. Referring to Part III, approximately the following troops will be available at the close of the successive years:

	Fully-trained mobile troops.	Partially-trained Continental Army.	Harbor-defense troops.	Total.
First year.....	160,000	185,000	30,000	375,000
Second year.....	219,000	351,000	40,000	610,000
Third year.....	320,000	500,000	50,000	870,000
Fourth year.....	383,000	500,000	52,000	935,000
Fifth year.....	439,000	500,000	54,000	993,000
Sixth year.....	489,000	500,000	56,000	1,045,000
Seventh year.....	534,000	500,000	58,000	1,092,000
Eighth year.....	574,000	500,000	60,000	1,134,000

A study of these figures and of the difficulties we have experienced in the past in the matter of supplies lead to the conclusion that the program adopted for procuring reserve supplies should be such that at the close of each year we should have in use and in store, at home and oversea, supplies of all kinds necessary to equip:

	Infantry divisions.	Cavalry divisions of 9 regiments.	Harbor-defense troops
First year.....	13	3	30,000
Second year.....	22	5	40,000
Third year.....	32	6	50,000
Fourth year.....	34	7	52,000
Fifth year.....	36	8	54,000
Sixth year.....	37	9	56,000
Seventh year.....	38	10	58,000
Eighth year.....	40	10	60,000

The supplies acquired during the first three years should include all articles which can not be obtained in sufficient quantities on 15 days' notice, those acquired during the last five years to include only those articles which can not be obtained on three months' notice. After the eighth year the program should be extended to provide for the storing of such additional machine guns, rifles, field guns, ammunition, etc., as may be considered advisable.

58. In order that vast supplies pertaining to one supply bureau should not be secured and relatively nothing be done by other supply bureaus, supplies should be obtained progressively in complete division units.

59. In order that the efforts of the various supply bureaus may be properly coordinated by the Chief of Staff, reserve supplies should

be collected in general supply depots located in accordance with the general principle below enumerated. Each general supply depot should be considered a place of issue in time of peace for all articles of field equipment, so that the stock on hand will be continually turned over and the machinery for the issuing and forwarding of supplies will be in operation at the outbreak of war. The commander of each general supply depot should be either a line or a staff officer specially selected by and reporting direct to the Chief of Staff or to the department commander and independent of the control of any one particular staff department, but keeping in touch with all. The commander of each general supply depot should be assisted by the necessary commissioned, enlisted, and civilian personnel. Supplies for not more than three division units should be stored at any one locality. Each place selected for a reserve storehouse should be one that will be at all times under adequate military protection, where ground is available and where abundant railroad facilities exist.

60. As a general military principle, no supply depot, arsenal, nor manufacturing plant of any considerable size, supported by War Department appropriations for military purposes, should be established or maintained east of the Appalachian Mountains, west of the Cascade or Sierra Nevada Mountains, nor within 200 miles of our Canadian or Mexican borders, and steps should be taken gradually to cause to be moved depots and manufacturing plants already established in violation of this military principle.

61. The estimated cost of the field equipment of one Infantry division, Tables of Organization 1914, is as follows:

Kind of supplies.	Can be obtained in the open market in great quantities at any time.	Can be obtained on 15 days' notice.	Can be obtained on 3 months' notice.	Can not be obtained on 3 months' notice.
Signal supplies.....	\$722. 12	\$1,688. 51	\$6,030. 46	\$385,310. 26
Quartermaster supplies.....	51,983. 35	54,054. 45	3,177,083. 47	.....
Engineer supplies.....	1,835. 28	471. 59	7,703. 97	8,428. 95
Ordnance supplies.....	5,779. 67	7,730. 96	257,489. 89	4,164,770. 68
Medical supplies.....	10,997. 95	10,189. 63	88,861. 51	.....

And the estimated cost of the field equipment of one Cavalry division of nine regiments is approximately as follows:

Kind of supplies.	Can be obtained in the open market in great quantities at any time.	Can be obtained on 15 days' notice.	Can be obtained on 3 months' notice.	Can not be obtained on 3 months' notice.
Signal supplies.....	\$370. 80	\$1,638. 53	\$4,290. 61	\$277,156. 43
Quartermaster supplies.....	55,102. 48	76,143. 40	4,584,028. 93	.....
Engineer supplies.....	1,769. 59	416. 53	10,885. 20	3,999. 45
Ordnance supplies.....	31,862. 02	18,630. 56	311,056. 68	3,541,004. 68
Medical supplies.....	13,454. 99	13,060. 57	108,630. 36	.....

62. While the amount of money involved is large, practically all of it will remain at home, especially if every effort be made by the sup-

ply bureaus to eliminate from supply tables all articles not of domestic manufacture. It must also be kept in mind that it is cheaper to buy war supplies in time of peace than in time of war.

List of Brochures Prepared by the War College Division, General Staff Corps, as Supplements to the Statement of a Proper Military Policy for the United States.

NOVEMBER, 1915.

Doc.
No

506. Changes in organization found necessary during progress of the European War. WCD 4886-23.
507. Comparison of costs of our military establishment with those of other countries. WCD 9053-120.
508. Coordination of the mobile and coast artillery units of the army in the national defense. WCD 8911-9.
509. Development of large caliber mobile artillery and machine guns in the present European War. WCD 9239-1.
510. Educational institutions giving military training as a source for a supply of reserve officers for a national army. WCD 9053-121.
511. Elimination of unnecessary expense from army administration. WCD 9053-113.
512. Finances and costs of the present European War. WCD 9287-1.
513. Fortifications. WCD 4896-4.
514. General Staffs of certain belligerent powers. WCD 9286-2.
515. Military aviation. WCD 9311-1.
516. Militia as organized under the Constitution and its value to the Nation as a military asset. WCD 7835-9.
517. Mobilization of industries and utilization of the commercial and industrial resources of the country for war purposes in emergency. WCD 8121-45.
518. Modern organization for the Regular Army and its use as a model in organizing other forces. WCD 9302-1.
519. Motor transport in campaign. WCD 9318-1.
520. Organization and administration of the War Department adapted to a change from peace conditions to a state of war. WCD 9262-14.
521. 1. Organization, training, and mobilization of a force of citizen soldiery.
2. Method of training a citizen army on the outbreak of war to insure its preparedness for field service. WCD 7541-12.
522. Organization, training, and mobilization of a reserve for the Regular Army. WCD 8106-15.
523. Organization, training, and mobilization of volunteers under the act of April 25, 1914. WCD 8160-25.
524. Outline of plan for military training in public schools of the United States. WCD 9064-16.
525. Pension roll as affected by the war with Spain in 1898. WCD 9290-3.
526. Personnel versus matériel in plans for national defense. WCD 9314-1.
527. Places of origin and ability to procure supplies needed in vast quantities in time of war. WCD 8121-39.
528. Proper relationship between the army and the press in war. WCD 8976-6.
529. Recruitment of officers in time of peace in the principal armies of Europe. WCD 9278-1.
530. Standardization of methods of military instruction at schools and colleges in the United States, with draft of a bill to establish a Reserve Officers' Training Corps. WCD 9069-8.
531. Statistical comparison of universal and voluntary service. WCD 4886-25.
532. Strategic location of military depots, arsenals, and manufacturing plants in the United States. WCD 8121-42.
533. Sanitary troops in foreign armies. WCD 9319-1.
534. Training of forces of belligerent nations of Europe. WCD 9289-1.
535. Utilization of our resources in various means of transportation and of the services of trained specialists. WCD 9053-111.

REPORT OF THE ADJUTANT GENERAL.

REPORT OF THE ADJUTANT GENERAL.

WAR DEPARTMENT,
THE ADJUTANT GENERAL'S OFFICE,
October 3, 1916.

SIR: The following report covers the entire fiscal year 1916 and relates to the organization and operations of the Army and National Guard organizations in the Federal service as shown by the records of The Adjutant General's Office, and to the business of that office as a bureau of the War Department.

AUTHORIZED STRENGTH OF THE ARMY.

The strength of the Regular Army authorized by the President under the provisions of the act of February 2, 1901, and of the joint resolution of Congress of March 17, 1916, which latter authorized the President to recruit the line organizations to the maximum strength prescribed by the acts of February 2, 1901, and January 25, 1907, without regard to the limitation of 100,000 men for the line and the Philippine Scouts, imposed by the first-mentioned act, is shown in the following table:

Branches of service.	Officers.	Enlisted men.	Total.
General officers.....	24	.....	24
General Staff Corps.....	34	.....	34
Adjutant General's Department.....	23	.....	23
Inspector General's Department.....	17	.....	17
Judge Advocate General's Department.....	13	.....	13
Quartermaster Corps.....	256	6,403	6,659
Medical Department.....	¹ 660	² 5,388	6,048
Corps of Engineers.....	248	1,982	2,230
Ordnance Department.....	85	1,115	1,200
Signal Corps.....	106	1,472	1,578
Bureau of Insular Affairs.....	3	.....	3
Professors, United States Military Academy.....	7	.....	7
Chaplains.....	67	.....	67
Cavalry.....	810	17,594	18,404
Field Artillery.....	262	6,358	6,620
Coast Artillery Corps.....	747	19,321	20,068
Infantry.....	1,606	54,443	56,049
Porto Rico Regiment of Infantry.....	50	599	649
United States Military Academy detachments.....	.....	632	632
Recruiting parties, recruit depots, and unassigned recruits.....	.....	6,098	6,098
United States Disciplinary Barracks guards.....	.....	350	350
Service school detachments.....	.....	746	746
With disciplinary organizations.....	.....	110	110
Mounted orderlies.....	.....	7	7
Indian scouts.....	.....	75	75
Total Regular Army.....	5,018	122,693	127,711
Philippine Scouts.....	182	5,733	5,915
Aggregate.....	5,200	128,426	133,626

¹ Includes 155 officers of the Medical Reserve Corps assigned to active duty under the provisions of the act of Congress approved Apr. 23, 1908 (35 Stat. L., 66).

The act of June 3, 1916, provides that the enlisted strength of the Medical Department is not to be counted as a part of the enlisted strength of the Army, which is similar to the provision contained in the act of Mar. 1, 1857 (24 Stat. L., 435).

One of the temporary major generals referred to in the previous annual report was retired from active service December 4, 1915, causing a reduction during the year of one in the number of major generals.

The following increases in the authorized commissioned strength of the Army were authorized by the national defense act approved June 3, 1916, to take effect on the date of the approval of that act: General Staff Corps, 34, resulting from the application of the provisions of section 27 of the act of February 2, 1901, to officers below the rank of brigadier general detailed to the General Staff; Quartermaster Corps, 73, caused by the appointment of former pay clerks as second lieutenants of that corps, and Porto Rico Regiment of Infantry, 19. There was also an increase of 1 additional officer in the Cavalry arm, an increase of 58 in the number of officers of the Medical Reserve Corps assigned to active duty, and 1 additional officer in the Medical Corps. There was a decrease of 1 additional officer in the Coast Artillery Corps, making a net increase in the authorized commissioned strength of the Army during the year of 184.

There was an increase of 370 enlisted men for the Ordnance Department and 17 for the service school detachments authorized during the year, in addition to the following increases authorized by the joint resolution of Congress of March 17, 1916: Infantry, 19,104; Cavalry, 3,446; Field Artillery, 823; Coast Artillery Corps, 302, and Engineers, 40. There was a decrease of 27 in the number of authorized recruits during the year, and a decrease of 6 in the Field Artillery, leaving a net increase of 24,069 in the authorized enlisted strength of the Army during the year.

The authorized enlisted strength of the Hospital Corps was increased 1,376 during the year.

There was no change in the authorized strength of the Philippine Scouts during the year covered by this report.

ACTUAL STRENGTH OF THE ARMY.

The actual strength of the entire military establishment on June 30, 1916, by branches of service, is shown in the following table:

Branches of service.	Officers.	Enlisted men.	Total.
General officers.....	24	.....	24
Staff corps and departments.....	1 1,206	1 12,374	13,580
Engineers.....	228	1,826	2,054
Cavalry.....	782	15,160	15,942
Field Artillery.....	257	5,627	5,884
Coast Artillery Corps.....	739	18,273	19,012
Infantry.....	1,607	34,313	35,920
Miscellaneous.....	.....	9,440	9,440
Total Regular Army.....	1 4,843	1 97,013	101,856
Philippine Scouts.....	182	5,603	5,785
Aggregate.....	1 5,025	1 102,616	107,641

1 Includes 154 first lieutenants of the Medical Reserve Corps.

1 Includes 4,670 enlisted men of the Medical Department.

COMPARISON OF AUTHORIZED AND ACTUAL STRENGTH.

The following table is presented for the purpose of showing the authorized and the actual strength of the military establishment on June 30, 1916, and June 30, 1915, together with the increases during the year and the number of vacancies on each of those dates. It includes the enlisted strength of the Medical Department and the Quartermaster Corps.

	Regular Army.			Philippine Scouts.			Total.		
	Off- cers.	En- listed men.	Total.	Off- cers.	En- listed men.	Total.	Off- cers.	En- listed men.	Total.
Authorized strength:									
June 30, 1916.....	5,018	122,603	127,711	182	5,733	5,915	5,200	126,426	132,626
June 30, 1915.....	4,844	97,248	102,092	182	5,733	5,915	5,016	102,961	107,997
Increase during year.....	174	25,445	25,629				184	25,445	25,629
Actual strength:									
June 30, 1916.....	4,843	97,011	101,856	182	5,603	5,785	5,025	102,616	107,641
June 30, 1915.....	4,616	95,765	100,481	182	5,430	5,612	4,796	101,193	106,998
Increase during year.....	227	1,248	1,475		173	173	227	1,421	1,648
Vacancies:									
June 30, 1916.....	175	25,690	25,865		130	130	175	25,810	25,985
June 30, 1915.....	218	1,483	1,701		303	303	215	1,796	2,004

The large number of vacancies (175) in commissioned personnel on June 30, 1916, is due to the fact that the 124 graduates of the Military Academy were not appointed until after the close of the fiscal year and to the increase resulting from the application to the General Staff of the provisions of section 27 of the act of February 2, 1901. That application was authorized by the act of June 3, 1916.

The large number of vacancies in the enlisted force is due to the fact that the authorized strength was materially increased by the joint resolution of March 17, 1916, and during the short period between March 17 and the close of the fiscal year it was found impossible to enlist a sufficient number of men to fill the vacancies occurring from time to time and those resulting from the increase in the authorized strength. Every effort was made, and is being made, to secure a sufficient number of recruits to fill the Army to its authorized strength.

INCREASE IN THE ARMY.

(Authorized by the act of June 3, 1916.)

The act of June 3, 1916, provides for a material increase in both the commissioned and enlisted strength of the Regular Army, and also provides for the federalization of the National Guard. Those provisions of the bill that pertain to this office are mentioned in this report under the subjects to which they relate.

The increases in the numbers of officers and enlisted men authorized by the bill is to be made in five annual increments, with the provision "That in the event of actual or threatened war or similar emergency, in which the public safety demands it, the President is authorized to immediately organize the entire increase authorized by this act, or so much thereof as he shall deem necessary."

Under the provisions of the act cited, the authorized enlisted strength for the fiscal year 1917, which includes the first increment, is as follows:

Infantry.....	51, 224
Cavalry.....	17, 357
Field Artillery.....	7, 881
Engineers.....	2, 198
Coast Artillery Corps.....	21, 423
Quartermaster Corps.....	8, 000
Signal Corps.....	3, 369
Ordnance Department.....	1, 241
Medical Department.....	6, 614
Service school detachments.....	752
Military Academy detachments.....	684
United States Disciplinary Barracks guards.....	468
Disciplinary organizations.....	101
Mounted orderlies.....	29
Sergeants on duty with National Guard.....	209
Indian scouts.....	75
Recruiting parties and unassigned recruits.....	11, 539
<hr/>	
Total Regular Army.....	133, 164
Philippine Scouts.....	5, 733
<hr/>	
Aggregate.....	138, 897

In time of peace the total authorized enlisted strength of the line of the Army is limited to 175,000. Under that limitation the total enlisted strength will be 175,000 for the line (including Ordnance Department) and approximately 42,750 for the staff corps and departments and miscellaneous organizations, making a total of approximately 217,750 for the Regular Army, or an aggregate strength of approximately 223,580 if the enlisted strength (5,733) of the Philippine Scouts is included. Approximate figures are given, because the strength of some of the staff corps and departments is not fixed by the act, but will be fixed by the President from time to time in accordance with the needs of the service. The total enlisted strength of the Medical Department, limited to 5 per cent of the total enlisted strength of the rest of the Army, can not be determined at this time, because the strength of all of the other staff corps and departments is not fixed.

The total number of officers authorized by the act in time of peace is approximately 11,450, including the 182 officers of the Philippine Scouts, while the maximum number of officers authorized would be about 580 more, all the additions being in the Medical Department. The exact number of officers authorized can not be stated, because the number of additional officers varies from time to time, and because the number of retired officers that will be transferred to the active list under the provisions of the act of March 4, 1915, can not be foretold.

The total maximum enlisted strength (war strength) of the Army, including the Philippine Scouts, is nearly 298,000. This figure is approximate and is based on increases in the staff corps and departments in proportion to the increases authorized for the first increment.

The total number of officers authorized for the fiscal year 1917 is 7,252, including 182 officers of the Philippine Scouts.

PHILIPPINE SCOUTS.

There was no change in the organization and authorized strength of the Philippine Scouts during the past fiscal year. The scouts are organized into 13 battalions of 4 companies each, a total of 52 companies of enlisted natives of the Philippine Islands, with a total authorized strength of 182 officers and 5,733 enlisted men.

GEOGRAPHICAL DISTRIBUTION OF TROOPS.

The geographical distribution of the Regular Army on June 30, 1916, is shown in the following table:

Geographical distribution.	Officers.	Enlisted men.	Total.
In the United States ¹	3,622	67,416	71,038
In Alaska.....	23	769	792
In the Philippine Islands:			
Regular Army.....	480	11,404	11,884
Philippine Scouts.....	182	5,603	5,785
In China.....	41	1,233	1,274
In Porto Rico.....	35	679	714
In Hawaii.....	333	8,112	8,445
In the Isthmian Canal Zone.....	253	6,846	7,099
Troops en route and officers at foreign stations.....	56	554	610
Total.....	5,025	102,616	107,641

¹ Includes troops serving in Mexico, it being deemed inadvisable at this time to give the exact number of troops serving in that country.
² Includes 154 first lieutenants of the Medical Reserve Corps.
³ Includes 4,670 enlisted men of the Medical Department.

GEOGRAPHICAL DEPARTMENTS.

There was no change during the past fiscal year in the constitution of the geographical departments established for purposes of military administration. A statement showing the territory embraced in the several geographical departments was printed in the annual report for the year 1914.

CHANGES OF STATIONS OF TROOPS.

The following tables show the movement of troops to and from the insular possessions, and changes of stations of troops within the continental limits of the United States during the fiscal year ended June 30, 1916:

Movements of troops on transports to and from the insular possessions.

Transport.	Left—		Arrived at—		Troops on board.
	Place.	Date.	Place.	Date.	
Thomas...	San Francisco, Cal.	1915. Aug. 5	Manila, P. I.....	1915. Sept. 2	Fourth, Seventeenth, Thirty-third, Thirty-sixth, and One hundred and eleventh Companies Coast Artillery Corps. Eighth Cavalry and Company L, Twenty-fourth Infantry. Headquarters and 9 companies Twenty-fourth Infantry.
Sherman...	Manila, P. I.....	Aug. 15	San Francisco, Cal.	Sept. 12	
Thomas...	.....do.....	Sept. 15	.....do.....	Oct. 12

Movements of troops on transports to and from the insular possessions—Continued.

Transport.	Left—		Arrived at—		Troops on board.
	Place.	Date.	Place.	Date.	
Buford....	Galveston, Tex....	1915. Sept. 29	Manila, P. I.....	1915. Mar. 5 ¹	Twenty-seventh Infantry.
Sheridan..	San Francisco, Cal.	Oct. 5	.....do.....	Nov. 5	Fifteenth Cavalry.
Logan.....	Manila, P. I.....	Oct. 15	San Francisco, Cal.	Nov. 14	Companies C and I, Twenty-fourth Infantry.
Sheridan..	.....do.....	Nov. 15	.....do.....	Dec. 14	Seventh Cavalry.
Do.....	San Francisco, Cal.	1916. Jan. 5	Manila, P. I.....	1916. Feb. 3	Ninth Cavalry.
Thomas....	.....do.....	Feb. 5	Honolulu, Hawaii.	Feb. 13	Thirteenth Band, Coast Artillery Corps.
Kilpatrick.	Galveston, Tex....	Feb. 23	Cristobal, Canal Zone.	Mar. 1	First Squadron, Twelfth Cavalry.
Do.....	.....do.....	Mar. 11	.....do.....	Mar. 18	Batteries E and F, Fourth Field Artillery.
Do.....	New York, N. Y..	Apr. 8	.....do.....	Apr. 28	Fifth Band and Eighth, Eighty-seventh, and One hundred and twenty-fourth Companies, Coast Artillery Corps.
Do.....	Fort Monroe, Va..	Apr. 11	.....do.....	.....do.....	Seventy-third Company, Coast Artillery Corps.
Do.....	Pensacola, Fla....	Apr. 18	.....do.....	.....do.....	Fifteenth Company, Coast Artillery Corps.

¹ Delay caused by slide in Panama Canal.

Changes of stations of troops within the United States.

Organization.	Left—		Arrived at—	
	Place.	Date.	Place.	Date.
One hundred and eleventh Company, Coast Artillery Corps.	Fort Dade, Fla. ¹	1915. July 24	San Francisco, Cal.....	1915. July 29
Fourth Company, Coast Artillery Corps.	Fort Mott, N. J. ¹	July 25	.....do.....	July 30
Seventeenth Company, Coast Artillery Corps.	Fort Washington, Md. ¹....	.....do.....	.....do.....	Do.
Thirty-sixth Company, Coast Artillery Corps.	Fort Mott, N. J. ¹.....	.....do.....	.....do.....	Do.
Thirty-third Company, Coast Artillery Corps.	Fort Columbia, Wash. ¹	July 28	.....do.....	Do.
Eighth Cavalry.....	San Francisco, Cal.....	Sept. 21	Fort Bliss, Tex.....	Sept. 24
Fifteenth Cavalry.....	Fort Bliss, Tex. ¹	Sept. 25	San Francisco, Cal.....	Sept. 28
Seventh Cavalry.....	San Francisco, Cal.....	Dec. 21	Douglas, Ariz.....	Dec. 23
Ninth Cavalry.....	Douglas, Ariz. ¹	Dec. 26	San Francisco, Cal.....	Dec. 28
First Squadron, Twelfth Cavalry.	Mercedes, Tex. ²	1916. Feb. 21	Galveston, Tex.....	1916. Feb. 23
Thirtieth Company, Coast Artillery Corps.	Fort Rosecrans, Cal.....	Feb. 15	Fort Worden, Wash.....	Feb. 19
One hundred and sixtieth Company, Coast Artillery Corps.	.....do.....	Feb. 17	Fort Stevens, Oreg.....	Feb. 21
Twenty-fourth Infantry....	San Francisco, Cal.....	Feb. 25	Fort D. A. Russell, Wyo...	Feb. 28
Batteries E and F, Fourth Field Artillery.	El Paso, Tex.....	Mar. 8	Galveston, Tex.....	Mar. 10
One hundred and twenty-fourth Company, Coast Artillery Corps.	Fort Andrews, Mass. ²	Apr. 6	New York, N. Y.....	Apr. 7
Eighth Company, Coast Artillery Corps.	Fort McKinley, Me. ²	Apr. 7	.....do.....	Apr. 8
Eighty-seventh Company, Coast Artillery Corps.	Fort Totten, N. Y. ²	Apr. 8	.....do.....	Do.

¹ En route to Philippine Islands.

² En route to Canal Zone.

The foregoing table does not show practice marches, temporary changes in stations, or movement of troops along the Mexican border.

TROOPS SERVING OUTSIDE THE CONTINENTAL LIMITS OF THE UNITED STATES.

The troops serving outside the continental limits of the United States, excluding those in Mexico, at the close of the fiscal year were as follows:

PHILIPPINE DEPARTMENT.

First Company, Second Aero Squadron.

Ninth and Fifteenth Cavalry.

Second Field Artillery.

Fourth, Eleventh, Seventeenth, Eighteenth, Twenty-third, Thirty-third, Thirty-sixth, Forty-second, Seventieth, Eighty-sixth, Ninetieth, Ninety-fifth, Ninety-ninth, One hundred and eleventh, and One hundred and forty-second Companies, and Ninth Band, Coast Artillery Corps.

Eighth, Thirteenth, Fifteenth (headquarters, band, first and third battalions detached in China), Twenty-fourth, and Twenty-seventh Infantry.

Companies K and L, Corps of Engineers.

Companies F and L, Signal Corps.

Field Hospital No. 4 and Ambulance Company No. 4.

HAWAIIAN DEPARTMENT.

Fourth Cavalry.

First Field Artillery.

Thirteenth Band, Tenth, Fifty-sixth, Sixty-eighth, Seventy-fifth, Ninety-first, One hundred and fourth, One hundred and fifth, One hundred and forty-third, and One hundred and fifty-ninth Companies, Coast Artillery Corps.

First, Second, and Twenty-fifth Infantry.

Company I, Corps of Engineers.

Company E, Signal Corps.

CANAL ZONE.

Fifth Band, Eighth, Fifteenth, Sixteenth, Twenty-first, Fortieth, Forty-fourth, Forty-fifth, Seventy-third, Eighty-first, Eighty-seventh, One hundred and sixteenth, One hundred and nineteenth, One hundred and twenty-fourth, and One hundred and forty-fourth Companies, Coast Artillery Corps.

First Squadron, Twelfth Cavalry.

Batteries E and F, Fourth Field Artillery.

Fifth, Tenth, and Twenty-ninth Infantry.

Company M, Corps of Engineers.

Third Platoon, Company H, Signal Corps.

Ambulance Company No. 8.

The First Battalion, Fourteenth Infantry, and Companies C and K, Signal Corps, are stationed in Alaska.

SECOND LIEUTENANTS APPOINTED.

During the year ended June 30, 1916, 163 second lieutenants, graduates of the United States Military Academy, were appointed to the Army, 23 being assigned to the Corps of Engineers, 33 to the Cavalry arm, 11 to the Field Artillery arm, 31 to the Coast Artillery Corps, and 65 to the Infantry arm. Five civilians were appointed probational second lieutenants in the Corps of Engineers, under the provisions of the act of Congress approved February 27, 1911 (36 Stat. L., 957).

Since June 30, 1916, the close of the fiscal year, 124 graduates of the United States Military Academy have been appointed to the Army. All of them, with the exception of 1 who was not graduated until June 29, 1916, and was not appointed until that date,

were appointed to rank from June 13, 1916, the date of the graduation of their class. Of those appointed, 24 were assigned to the Corps of Engineers, 22 to the Cavalry, 10 to the Field Artillery arm, 20 to the Coast Artillery Corps, and 48 to the Infantry arm.

COMMISSIONED OFFICERS IN ACTIVE SERVICE.

On June 30, 1916, there were 4,843 commissioned officers on the active list of the Army. Of these, 1,458 (including 65 chaplains) were general officers or officers of the staff corps and departments, 782 belonged to the Cavalry, 257 to the Field Artillery, 739 to the Coast Artillery Corps, and 1,607 to the Infantry.

Of the 1,458 general and staff officers 1,354 were present for duty, 27 on leave, 4 absent sick, and 73 on detached duty. Of the 3,385 line officers 2,699 were present for duty, 71 on leave, 22 absent sick, and 593 on detached duty.

From the foregoing it appears that 20.26 per cent of the line officers and 7.13 per cent of the general and staff officers were absent from their commands. At the close of the preceding fiscal year 25.33 per cent of the line officers and 11.66 per cent of the general and staff officers were so absent.

The decrease in the total number of officers absent from their commands at the end of this fiscal year, as compared with the preceding year, is due chiefly to the decrease in the number of officers on detached service as shown in detail in the section of this report relating to "Officers on detached service."

In addition to the officers on the active list there were 128 retired officers under assignment to active duty on June 30, 1916, as is more fully shown elsewhere in this report.

ADDITIONAL OFFICERS.

The Army appropriation act approved March 3, 1911 (36 Stat. L., 1058), provides that every line officer on the active list below the grade of colonel who has lost in lineal rank through the system of regimental promotion in force prior to October 1, 1890, may, in the discretion of the President and subject to examination for promotion as prescribed by law, be advanced to higher grades in his arm up to and including the grade of colonel, in accordance with the rank he would have been entitled to hold had promotion been lineal throughout the arm or corps to which he permanently belongs. It is also provided that officers advanced to higher grades under the law cited shall be "additional officers" in those grades.

From the date of approval of the act to the close of the past fiscal year there had been 76 advancements in grade (51 to the grade of colonel and 25 to that of lieutenant colonel) under the act of March 3, 1911, before cited. The table following shows the grades to which and the arms in which these advancements were made.

Arms of service.	From lieutenant-colonel to colonel.	From major to lieutenant-colonel.	Total.
Cavalry.....	19	14	33
Field Artillery.....	2	.....	2
Coast Artillery Corps.....	6	2	8
Infantry.....	24	9	33
Total.....	51	25	76

Of the 76 advancements shown in the foregoing table, 32 were advancements in the cases of 16 officers who were advanced to the grade of lieutenant colonel and subsequently to that of colonel. Twenty-three of the officers advanced were retired from active service prior to June 30, 1916; 2 died; 5 were promoted lineally and ceased to be "additional officers," and 5 were appointed brigadier generals, leaving 25 additional officers in the service June 30, 1916. Of these, 11 were in the Cavalry arm, 1 in the Field Artillery arm, 3 in the Coast Artillery Corps, and 10 in the Infantry arm.

All of the officers advanced in grade had already reached the grade of major. The 25 majors advanced to be additional lieutenant colonels left a like number of vacancies in the grade of major, which caused the promotion to the next higher grade of the same number of captains, first lieutenants, and second lieutenants. Of the 51 lieutenant colonels advanced, 35 left vacancies in that grade and caused the promotion to the next higher grade of the same number of majors, captains, first lieutenants, and second lieutenants. The 16 additional lieutenant colonels who were advanced to be additional colonels did not leave any vacancies in the grade of lieutenant colonel.

OFFICERS ON DETACHED SERVICE.

The number of officers absent from their commands on detached service was lower than that of the previous year. On June 30, 1915, there were 7.56 per cent of the general officers and officers of the staff corps and departments and 21.32 per cent of the line officers on detached service. On June 30, 1916, those percentages were 5.11 for general and staff officers and 17.52 for officers of the line.

The character of the duty performed by the officers of the Army on detached service on June 30, 1916, the numbers so detached, and their ranks and branches of service are shown in the table following.

Duty and branches of service from which detached.	Rank.							
	Major general.	Brigadier general.	Colonel.	Lieutenant colonel.	Major.	Captain.	First lieutenant.	Second lieutenant.
Army War College:								
General officers.....		1						
Staff departments.....				1		1		
Field Artillery.....					1			
Coast Artillery Corps.....			1		1			
Total.....		1	1	1	2	1		
United States Military Academy:								
Staff departments.....				2		10	3	
Cavalry.....						1	5	5
Field Artillery.....						1	3	
Coast Artillery Corps.....			1			4	13	6
Infantry.....						4	10	12
Total.....			1	2		20	34	23
Army Service Schools, Fort Leavenworth, Kans.:								
Staff departments.....					4	2		
Cavalry.....						1		
Field Artillery.....					1	2		
Infantry.....					1	8	4	
Total.....					6	13	4	
Artillery School, Fort Monroe, Va.:								
Coast Artillery Corps.....				1		10	26	10
Mounted Service School, Fort Riley, Kans.:								
Cavalry.....					1	1	2	
School of Fire for Field Artillery, Fort Sill, Okla.:								
Field Artillery.....						1		
School of Musketry, Fort Sill, Okla.:								
Infantry.....			1				1	
Instructors at civil educational institutions:								
Cavalry.....						1	7	1
Field Artillery.....							1	
Coast Artillery Corps.....							1	
Infantry.....					1	1	44	6
Total.....					1	2	53	7
Recruiting service:								
Cavalry.....			1	1		9	13	
Field Artillery.....				1		1	5	
Coast Artillery Corps.....						7	12	
Infantry.....			3	1	2	23	21	1
Total.....			4	3	2	40	51	1
Aide-de-camp:								
Cavalry.....						4	4	2
Field Artillery.....						2		1
Coast Artillery Corps.....							2	1
Infantry.....						1	4	3
Total.....						7	10	7
With Philippine government:								
Cavalry.....					1			
Infantry.....					2			
Total.....					3			
With Panama Canal:								
General officers.....	1							
Staff departments.....				3	4	10	1	
Coast Artillery Corps.....						1		
Infantry.....						1		
Total.....	1			3	4	12	1	

Duty and branches of service from which detached.	Rank.							
	Major general.	Brigadier general.	Colonel.	Lieutenant colonel.	Major.	Captain.	First lieutenant.	Second lieutenant.
Military attachés:								
Staff departments.....			2	1				
Cavalry.....						5		
Field Artillery.....								1
Coast Artillery Corps.....					1	4		
Infantry.....						4	1	
Total.....			2	1	1	13	1	1
With Philippine Scouts:								
Cavalry.....						4		
Infantry.....						8		
Total.....						12		
In bureaus of War Department:								
Staff departments.....					2	1		
Cavalry.....						1		
Field Artillery.....					1			
Coast Artillery Corps.....			1			7		
Infantry.....			1		2	3	3	
Total.....			2		5	12	3	
At department and brigade headquarters:								
Cavalry.....			2	1		2	3	
Field Artillery.....						1		
Coast Artillery Corps.....					2		1	
Infantry.....			4		1	2	1	
Total.....			6	1	3	5	5	
At Disciplinary Barracks:								
Cavalry.....					1		1	
Coast Artillery Corps.....						1	1	
Infantry.....						5	11	6
Total.....					1	6	13	6
With militia:								
Staff departments.....					6	1		
Cavalry.....			1		1	5	5	
Field Artillery.....						7	8	
Coast Artillery Corps.....				1	1	10	1	
Infantry.....				5	6	35	20	
Total.....			1	6	14	58	34	
Alaskan Road Commission:								
Staff departments.....							1	
Infantry.....			1			1		
Total.....			1			1	1	
Office Engineer Commissioner, District of Columbia:								
Staff departments.....				1	1	1		
Office Public Buildings and Grounds:								
Staff departments.....				1		1		
Coast Artillery Corps.....							1	
Total.....				1		1	1	
Duty with Signal Corps:								
Cavalry.....						1		10
Field Artillery.....								1
Coast Artillery Corps.....							1	1
Infantry.....								10
Total.....						1	1	22
Special duty abroad:								
Staff departments.....					1	1		
Cavalry.....							2	
Field Artillery.....						1		
Coast Artillery Corps.....							2	
Total.....					1	2	4	

Duty and branches of service from which detached.	Rank.							
	Major general.	Brigadier general.	Colonel.	Lieutenant colonel.	Major.	Captain.	First lieutenant.	Second lieutenant.
Member of board: Coast Artillery Corps.....						1		
Special duty: Infantry.....					1	1		
With American Red Cross: Staff departments.....			1		1			
United States Soldiers' Home: Staff departments.....				1	3			
Observers with European armies: Staff departments.....				1	4			
Cavalry.....						1	1	
Field Artillery.....						1		
Infantry.....						1		
Total.....				1	4	3	1	
With Yellowstone Park detachment: Cavalry.....			1			1	1	2
Alaskan Engineering Commission: Cavalry.....							1	
With Quartermaster Corps: Cavalry.....						5	3	
Field Artillery.....						1		1
Total.....						6	3	1
Naval War College: Coast Artillery Corps.....			1	1	1			
Duty torpedo depot: Coast Artillery Corps.....						1		1
Total.....	1	1	22	23	55	232	250	82

RECAPITULATION.

Rank.	General officers and officers of staff corps and departments.	Cavalry.	Field Artillery.	Coast Artillery Corps.	Infantry.	Total.
Major general.....	1					1
Brigadier general.....	1					1
Colonel.....	3	5		4	10	22
Lieutenant colonel.....	10	2	1	4	6	23
Major.....	26	4	3	6	16	55
Captain.....	27	42	18	47	98	232
First lieutenant.....	5	48	17	60	120	250
Second lieutenant.....		20	4	20	38	82
Total.....	73	121	43	141	288	666
Percentage.....	5.11	15.47	16.73	19.08	17.92	13.84

It will be seen from the foregoing table that of the 593 line officers on detached duty, 532, or 90 per cent, were captains or lieutenants. Of the 719 line officers on detached duty at the end of the preceding year, 672, or 93 per cent, were captains or lieutenants.

The following table shows, by grades and arms of service, the number of officers detached from their proper commands on June 30, 1916, under the provisions of the act of Congress approved March 3, 1911 (36 Stat. L., 1045):

Arms of service.	Grades.					Total.
	Colonel.	Lieu-tenant colonel.	Major.	Cap-tain.	First lieu-tenant.	
Cavalry	2	2	6	19	18	47
Field Artillery .....	.....	1	2	7	5	15
Coast Artillery Corps.....	2	2	6	18	16	44
Infantry	4	4	13	38	35	94
Total.....	8	9	27	82	74	200

The character of employment of those officers, by grades, on June 30, 1916, is shown in the following table:

Character of duty.	Grades.					Total.
	Colonel.	Lieu-tenant colonel.	Major.	Cap-tain.	First lieu-tenant.	
With Organized Militia of 43 States.....	.....	5	5	34	22	66
On other than militia duty.....	8	4	22	48	52	134
Total.....	8	9	27	82	74	200

RETIRED OFFICERS ON ACTIVE DUTY.

On June 30, 1916, there were 128 retired officers under assignment to active duty. The following table shows the grades and employment of those officers:

Duty.	Lieu-tenant general.	Colonel.	Lieu-tenant colonel.	Major.	Cap-tain.	First lieu-tenant.	Second lieu-tenant.	Total.
At Soldiers' Home.....	1	1	.....	1	.....	.....	.....	3
On recruiting service.....	2	4	10	11	3	.....	30
With State militia.....	4	2	7	9	1	.....	23
At Army Service Schools, Fort Leavenworth, Kans.....	1	.....	.....	.....	.....	1
At Army War College.....	1	1	.....	.....	.....	2
At civil educational institutions.....	1	.....	5	16	8	2	32
Doorkeeper to President.....	1	.....	.....	.....	1
Acting quartermaster.....	1	.....	12	12	8	1	34
With Signal Corps.....	1	.....	1	.....	.....	2
Total.....	1	9	9	37	49	20	3	128

Of the retired officers on duty, as shown in the foregoing table, 1 lieutenant general, 1 colonel, and 1 major (all at the United States Soldiers' Home in this city), 1 captain, and 1 second lieutenant (on college duty) received from the United States only the retired pay of

their respective grades; 8 colonels and 9 lieutenant colonels received the pay and allowances that a retired major would receive under a like assignment; and 36 majors, 48 captains, 20 first lieutenants, and 2 second lieutenants received the active pay and allowances of their respective grades.

OFFICERS EXAMINED FOR PROMOTION.

During the fiscal year 2,197 officers of the Army were examined and 2 were reexamined for promotion.

Of the 2,197 officers examined, 2,179 were found professionally qualified, 4 were found professionally disqualified and will be suspended from promotion for one year, and 14 were examined and found physically disqualified and were retired after the close of the fiscal year. Of the 2 officers reexamined, 1 was found qualified and 1 was honorably discharged from the Army.

The act of June 3, 1916, extended the provisions of previous law requiring examination to determine fitness of officers for promotion to include examination for promotion to all grades below that of brigadier general. Previous laws provided for the examination of officers up to and including the grade of captain before promotion to the next higher grade, except medical officers, who were examined for promotion to any grade below that of brigadier general.

RETIRED OFFICERS.

On June 30, 1915, there were 1,005 commissioned officers on the retired list. During the fiscal year ended June 30, 1916, 36 officers were placed on that list. In addition to the officers of the Regular Army placed on the retired list during the year there were 31 former officers of the Philippine Scouts—20 captains and 11 first lieutenants—who had been separated from active service by resignation, discharge, etc., and subsequently placed on the retired list as enlisted men placed on a list of retired officers of Philippine Scouts as of the grades held by them as officers of said scouts, under the provisions of section 26 of the national defense act approved June 3, 1916. Fifty of the officers on the retired list died during the year, 5 were restored to the active list as additional officers, under the provisions of the act of Congress approved March 4, 1915, leaving 1,017 officers, including those of the Philippine Scouts, on the retired list, June 30, 1916. Six of the brigadier generals were advanced to the grade of major general, 1 with the pay and allowances of a major general on the retired list, and the other 5 with the pay and allowances of a brigadier general on the retired list. One officer on the retired list was advanced one grade under the provisions of an act of Congress approved March 4, 1915, on account of services with the Canal Commission in the Canal Zone in connection with the construction of the Panama Canal. The table following shows the grades of the officers on the retired list and the causes of the retirement of those officers.

Grades.	By operation of law, 64 years of age (act of June 30, 1882).	After reaching 62 years of age (sec. 1244, R. S.).	On own appli- cation.				For disability.				Sec. 26, act of June 3, 1916.	After failure to pass second professional examination (act of Mar. 3, 1909).	Under special acts of Congress.	Total.
			After over 40 years' service (act of June 30, 1882).	After over 30 years' service (sec. 1243, R. S.).	With increase of one grade for services in con- nection with the construction of the Pana- ma Canal (act of Mar. 4, 1915).	In line of duty.			Not in line of duty (sec. 1252, R. S.).					
						Sec. 1251, Revised Statutes.	With increased rank (acts of Oct. 1, 1890, Apr. 23, 1908, and Mar. 3, 1909).	With full rank of command when wounded (act of July 28, 1866).						
Lieutenant general.....	2	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3
Major general.....	16	.....	6	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	25
Brigadier general.....	70	8	71	17	.....	16	.....	1	.....	.....	.....	.....	.....	183
Colonel.....	57	5	31	39	1	32	.....	1	.....	.....	.....	.....	.....	166
Lieutenant colonel.....	17	.....	5	33	1	25	12	.....	.....	.....	.....	1	.....	94
Major.....	10	.....	.....	40	3	78	44	2	1	.....	3	2	.....	183
Captain.....	4	.....	.....	12	.....	122	45	.....	3	.....	.....	6	.....	192
First lieutenant.....	2	.....	.....	.....	.....	66	20	.....	3	.....	.....	.....	.....	91
Second lieutenant.....	.....	.....	.....	.....	.....	21	.....	.....	1	.....	.....	1	.....	23
Chaplain:	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lieutenant colonel.....	2	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	3
Major.....	5	.....	.....	.....	.....	10	.....	.....	.....	.....	.....	.....	.....	15
Captain.....	4	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	7
First lieutenant.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1
Philippine Scouts:	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Captain.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	20	.....	.....	.....	20
First lieutenant.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	11	.....	.....	.....	11
Total.....	189	13	114	142	6	374	121	4	8	31	3	12	1,017	

Of the 4 officers retired under section 32 of the act of Congress approved July 28, 1866 (14 Stat. L., 337), on account of disability occasioned by wounds received in battle, with the full rank of the command held by them at the time such wounds were received, 1 was advanced three grades, 1 two grades, and 2 one grade. All of them, with the exception of the brigadier general, received a further advancement of one grade under the act of Congress approved April 23, 1904 (33 Stat. L., 264). In addition to these, 67 brigadier generals, 13 colonels, 27 lieutenant colonels, 54 majors, 16 captains, and 1 first lieutenant hold their present grades on the retired list through an advancement of one grade under the act of Congress approved April 23, 1904, making a total of 180 officers on the retired list June 30, 1916, who have been advanced one grade under that act because of service during the Civil War.

The table following shows, by grades, the number of officers of the Army retired from active service during the fiscal year ended June 30, 1916, and the causes of their retirement.

Grades.	By operation of law, 64 years of age (act of June 30, 1882).	On own application.			For disability.			Total.
		After over 40 years' service (act of June 30, 1882).	After over 30 years' service (sec. 1243, R. S.).	With increase of one grade (act of Mar. 4, 1915).	Incident to the service (sec. 1251, R. S.).	Preventing promotion (acts of Oct. 1, 1890, and Apr. 23, 1908).	Sec. 26, act of June 3, 1916.	
Major general.....	2							2
Brigadier general.....	1							1
Colonel.....	7	4	1		1			13
Lieutenant colonel.....				1	2			3
Major.....	1		1	1	1			4
Captain.....				3	6	1		10
First lieutenant.....					1	1		2
Chaplain (major).....				1				1
Philippine Scouts:								
Captain.....							20	20
First lieutenant.....							11	11
Total.....	11	4	2	6	11	2	31	67

COMMISSIONED OFFICERS WHO HAD CIVIL WAR SERVICE.

The official records show that of the 4,811 commissioned officers (including 154 officers of the Medical Reserve Corps called into active service) on the active list of the Regular Army June 30, 1916, none of them served in the Army, Navy, or Marine Corps during the Civil War otherwise than as a cadet prior to April 9, 1865, the last officer so serving being Col. John L. Clem, Quartermaster Corps, who was retired by operation of law, 64 years of age, on August 13, 1915.

There were 986 officers of the Army, other than Philippine Scouts, on the retired list June 30, 1916. Of these, 310 served in the Army, Navy, or Marine Corps, otherwise than as cadets prior to April 9, 1865. The following table shows, by grades, the number of officers on the retired list of the Army on June 30, 1916, and the number of those officers who had Civil War service otherwise than as cadets prior to April 9, 1865:

Grades.	Officers on the retired list June 30, 1916.		
	Total.	Civil War service.	No Civil War service.
Lieutenant general.....	3	3	
Major general.....	25	20	5
Brigadier general.....	183	145	38
Colonel.....	166	18	148
Lieutenant colonel.....	94	32	62
Major.....	183	57	126
Captain.....	192	22	170
First lieutenant.....	91	3	88
Second lieutenant.....	23		23
Chaplain:			
Lieutenant colonel.....	3	2	1
Major.....	15	8	7
Captain.....	7		7
First lieutenant.....	1		1
Total.....	986	310	676

It will be seen from the foregoing table that approximately 32 per cent of the officers of the Army on the retired list June 30, 1916, served as officers or enlisted men of the Army, Navy, or Marine Corps during the Civil War. On June 30, 1915, approximately 34 per cent of the officers of the Army on that list had Civil War service.

OFFICERS' RESERVE CORPS.

Provision is made in the national defense act approved June 3, 1916, for an Officers' Reserve Corps, to consist of sections corresponding to the various arms, staff corps, and departments of the Regular Army. As stated in the law, its object is "for the purpose of securing a reserve of officers available for service as temporary officers in the Regular Army, * * * as officers of the Quartermaster Corps and other staff corps and departments, as officers for recruit rendezvous and depots, and as officers of volunteers." The corps is to be organized under such rules and regulations as the President may prescribe. These rules and regulations are printed in General Orders No. 32, War Department, July 28, 1916.

The organization of the Officers' Reserve Corps is an effort to obtain and train in time of peace the large number of commissioned officers necessary in war or when war is imminent.

Especial inducements to secure trained and educated officers have been made to land-grant colleges, other universities and colleges, and to essentially military schools. When the act has been given full effect, by appropriations made and regulations promulgated, it is intended to supply students under military training at such institutions necessary uniforms, military equipment, and for those recommended by the officer on duty and the head of the institution commutation of subsistence for the last two years of the prescribed four-year course. Additional officers have been provided for detail to these colleges, to bring the military instruction up to the standard which its importance to the nation justifies.

That this is expected to add greatly to the military strength of the country is indicated by a provision in the national defense act that the total number of officers that may be appointed and commissioned in the Reserve Corps from this source is 50,000.

To secure the large number of educated and trained officers for the large armies that will be necessary under existing conditions in war is one of the greatest military problems; and it is hoped that the Officers' Reserve Corps provisions in the national defense act will in time solve it.

Copies of the rules and regulations governing appointments in the corps will be furnished to applicants therefor.

RETIRED ENLISTED MEN.

At the beginning of the fiscal year there were 4,028 enlisted men on the retired list created by the provisions of the act of Congress approved February 14, 1885 (23 Stat. L., 305), modified by the acts of Congress approved September 30, 1890 (26 Stat. L., 504), March 2, 1907 (34 Stat. L., 1218), and August 24, 1912 (37 Stat. L., 575).

During the fiscal year 310 enlisted men were placed on the retired list, 153 of the men on that list died, and 31 were transferred to

the list of retired commissioned officers of Philippine Scouts, under provisions of the national defense act approved June 3, 1916, leaving 4,154 enlisted men on the retired list at the end of the fiscal year.

PERSONS QUALIFIED TO HOLD VOLUNTEER COMMISSIONS.

Certificates were issued during the year, under the provisions of section 23 of the act of Congress approved January 21, 1903 (32 Stat. L., 779), in the case of 52 persons who were found upon examination by boards of officers convened for that purpose to be "specially qualified to hold commissions in any volunteer force which may hereafter be called for and organized under the authority of Congress, other than a force composed of Organized Militia." Of these, 10 were from New York, 5 from Minnesota, 4 from Washington, 2 from Massachusetts, 1 each from Illinois, Indiana, New Jersey, Ohio, Rhode Island, South Dakota, Wyoming, and the Philippine Islands; 17 were enlisted men of the Regular Army, and 2 were clerks of the Quartermaster Corps, United States Army; 1 was a commissioned officer of the Philippine Constabulary, and 3 were commissioned officers of the Philippine Scouts.

The board of officers appointed to recommend candidates for appointment as volunteer officers, as provided in General Order No. 42, War Department, 1915, reported on May 18, 1916 (date of latest report), that 658 candidates had been found qualified. These candidates were not required to pass a professional and physical examination, as were the persons to whom certificates were issued under the provisions of section 23 of the act of Congress approved January 21, 1903, but were required to make formal applications, upon a blank form furnished by the department, and to furnish letters and other evidence as to character and qualifications. The following table shows the number of candidates by grade, arm, corps, or department found qualified by the board to May 18, 1916, for appointment as volunteer officers:

Grades.	Adjutant General's Department.	Quartermaster Corps.	Judge Advocate General's Department.	Ordnance Department.	Corps of Engineers.	Signal Corps.	Cavalry.	Field Artillery.	Coast Artillery.	Infantry.	Chaplains.	Veterinarians.	Total.
Colonels.....		1			1		8	1		32			44
Lieutenant colonels.....	1	5	2	1	1		5	3		35			52
Majors.....	2	15	1	3	4		12	2		64			97
Captains.....		31		1	14	2	31	2	1	88			173
First lieutenants.....				2	22	1	35	6	13	70			159
Second lieutenants.....					6	2	22	4	5	58			107
											17	9	26
.....	3	52	3	7	48	5	113	18	24	359	17	9	638

of the national defense act, June 3, 1916, applicants as volunteer officers are no longer considered as referred to. Such applications will hereafter be referred to section 53 of that act, or the candidates will be

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HONOR SCHOOLS.

Culver Military Academy, Culver, Ind.
 Kemper Military School, Booneville, Mo.
 Kentucky Military Institute, Lyndon, Ky.
 New Mexico Military Institute, Roswell, N. Mex.
 New York Military Academy, Cornwall-on-Hudson, N. Y.
 St. John's Military Academy, Delafield, Wis.
 St. John's School, Manlius, N. Y.
 College of St. Thomas, St. Paul, Minn.
 Wentworth Military Academy, Lexington, Mo.
 Western Military Academy, Alton, Ill.

STUDENTS AND GRADUATES OF CIVIL INSTITUTIONS OF LEARNING AT WHICH ARMY OFFICERS ARE DETAILED AS MILITARY INSTRUCTORS.

In December, 1914, an effort was made by this office to ascertain for each of the 10 years 1905 to 1914, inclusive, the number of students enrolled at, and the number graduated from, civil institutions of learning at which officers of the Army were detailed as military instructors. Requests for information on the subject were sent to all such institutions (103 at the time), and all but 7 of them furnished figures. Data on this subject have been obtained from time to time since 1914, and the following table shows the numbers of students at, and graduates from, those civil educational institutions at which officers of the Army are detailed as instructors in military science and tactics that have furnished figures:

Year.	Number of students under military instruction.	Number of military students graduated.
1905.....	17,835	2,441
1906.....	18,138	2,890
1907.....	21,616	3,073
1908.....	24,101	3,441
1909.....	25,222	3,789
1910.....	27,122	4,215
1911.....	28,843	4,701
1912.....	29,979	4,757
1913.....	31,023	5,153
1914.....	33,424	4,970
1915.....	32,313	2,276 ¹
1916.....	35,091	2,474

¹ Includes only those who graduated in military science and tactics, and does not represent the total number of graduates that at some time during the course received instruction in that subject.

The report for 1914 included students enrolled at 101 institutions; that for 1915, students at 100 institutions; and that for 1916, students at 106 institutions.

STRENGTH AND LOSSES OF THE ARMY.

The tables facing show (A) the strength of the Army of the United States June 30, 1915, and June 30, 1916, with losses from all causes between those dates; (B) the strength and losses from all causes in the Army in each month of the fiscal year; (C) the strength of the Army by departments, etc., at the end of each month of the fiscal year; and (D) the number of deaths in the Army during the fiscal year.

SES FROM ALL CAUSES BETWEEN THOSE DATES.

ENLISTED MEN.											WOUNDED.		Returned from desertion.
Died.					To the Reserve.	Retired.	Deserted.	Missing.	Total.	Officers.	Enlisted men.		
Disease.	Accident.	Drowned.	Suicide.	Murder or homicide.									
16	5	5	3		257	22	151		1,313			73	
10	2	1	4		201	29	251		1,374			153	
10	4	3			105	16	62		581			50	
1	4				12	23	15		175			11	
3	1			1	78	12	20		396		3	23	
40	16	9	7	1	653	102	505		3,829		3	310	
2	3				47	1	121		342			78	
1	3	1			71	2	59		328			37	
5	1	1	1	2	63	2	28		303		6	25	
4	3	1			178	2	9		449			6	
4					22	3	51		246			38	
1	3	1	2	1	119	3	45		381			26	
2	1		1	1	19	9	33		195		8	9	
1	1			1	118	3	66		406			20	
2				1		7	0		141			6	
1	1			3	42	3	13	3	227	1	7	15	
1	1				35	2	65		258		3	46	
1	6	1		2	45		110		411	2	6	73	
3	2		1	2	14	4	31	1	269	2	8	20	
2	2	2			51	3	29		261		10	22	
3		1			20	1	21		217			26	
23	26	8	5	13	844	45	692	4	4,432	5	48	447	
1	2				58	1	9		203			4	
1					4	2	4		161			3	
Aggregate.													
Total.													
Philippine Scouts.													
At sea.													
Mexico.													
China.													
Philippine Islands.													
Hawaiian Islands.													
Porto Rico.													
Canal Zone.													
Alaska.													
United States.													
Regular Army.													

TATES BETWEEN JULY 1, 1915, AND JUNE 30, 1916.

ENLISTED MEN.												WOUNDED.		Returned from desertion.	
Killed in action.	Of wounds.	Died.						To the Reserve.	Retired.	Deserted.	Missing.	Total.	Officers.		Enlisted men.
		Disease.	Accident.	Drowned.	Suicide.	Murder or homicide.									
4	1	13	5	9	3			23	468		2,796			214	
2	1	22	17	11	7			23	483	1	2,921	1	4	260	
0	3	18	5	1	8	1		28	402		2,739	1	3	238	
0	4	21	6	1	5	2		25	331		2,735		8	236	
0	1	18	6	1	6		334	30	272		1,824		2	243	
2		25	6	2	7	4	575	29	212		1,976			254	
2		12	9	8	5	7	997	31	208		2,387			227	
7	1	26	6	3	3	3	692	29	228		2,302			172	
4	7	17	12	4	3	1	620	29	207		2,157	2	10	143	
8	5	20	4		3	1	597	28	267	1	2,134		9	143	
3	4	29	4	3	5	7	621	20	289		2,020		6	142	
9	9	22	9	3	3	2	190	26	489	3	1,493	1	13	170	
1	34	243	89	46	58	28	4,626	321	3,856	5	27,484	5	55	2,442	
3											95				
3		1									88				
5		1	1								80				
		2							5		45				
2		1									6			2	
4					1	1	2		4		21			2	
5									1		33				
2		1							2		12				
5		1					2				10			1	
3		2					1		1		10			3	
4							3				13			1	
1		2					3				15				
7		11	1		1	1	11		13		428			9	
8	34	254	90	46	59	29	4,637	321	3,869	5	27,912	5	5	2,451	

* Actual losses are 25,461, as the total gain from desertion during the year was 2,451.

ACH MONTH OF THE FISCAL YEAR.

6.	February, 1916.		March, 1916.		April, 1916.		May, 1916.		June, 1916.	
sted m.	Officers.	Enlisted men.	Officers.	Enlisted men.	Officers.	Enlisted men.	Officers.	Enlisted men.	Officers.	Enlisted men.
,401	1,009	25,645	937	25,629	947	23,393	818	19,819	760	17,837
,993	173	3,657	59	562	60	565	59	595	53	513
,105	1,337	24,731	1,664	31,200	1,673	31,667	1,903	37,697	1,967	40,475
,143	360	8,423	303	7,472	302	7,378	228	6,071	227	5,838
,000	348	9,038	347	8,969	345	8,510	334	8,157	333	8,112
,878	420	10,836	471	11,576	475	11,576	486	11,327	480	11,404
,549	182	5,587	182	5,604	182	5,604	182	5,606	182	5,603
,196	44	1,194	44	1,161	41	1,281	38	1,271	41	1,233
,355	1,033	9,914	904	8,232	887	9,632	857	9,659	962	11,601
,620	4,906	99,025	4,911	98,406	4,912	99,606	4,905	100,202	5,025	102,616

cing troops at camps, en route, recruits, etc.

JULY 1, 1915, AND JUNE 30, 1916.

de.	Murder or homicide.		Total.	
	Officers.	Enlisted men	Officers.	Enlisted men

The losses in the Army during the year ended June 30, 1916, are summarized in the following statement:

REGULAR ARMY.

Officers:

Died of disease, etc.....	35	
Resigned or discharged.....	38	
Dismissed.....	3	
Retired.....	36	
Deserted.....	1	
	<hr/>	113

Enlisted men:

Died of disease, etc.....	505	
Discharged upon expiration of term of service.....	5,793	
Discharged for disability, by sentence of court-martial, or by order.	12,378	
Deserted (includes 2,442 deserters subsequently returned to military control).....	3,856	
Retired.....	321	
Transferred to the Reserve.....	4,626	
Missing in action.....	5	
	<hr/>	27,484

Aggregate.....	<hr/>	<hr/>	27,597
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PHILIPPINE SCOUTS.

Officers: Resigned or discharged.....		3
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Enlisted men:

Died of disease, etc.....	14	
Discharged upon expiration of term of service.....	262	
Discharged for disability, by sentence of court-martial, or by order.	128	
Deserted (includes 9 deserters subsequently returned to military control).....	13	
Transferred to the Reserve.....	11	
	<hr/>	428

Aggregate.....	<hr/>	<hr/>	431
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AGGREGATE.

Officers:

Died of disease, etc.....	35	
Resigned or discharged.....	41	
Dismissed.....	3	
Retired.....	36	
Deserted.....	1	
	<hr/>	116

Enlisted men:

Died of disease, etc.....	519	
Discharged upon expiration of term of service.....	6,055	
Discharged for disability, by sentence of court-martial, or by order	12,506	
Deserted (includes 2,451 deserters subsequently returned to military control).....	3,869	
Retired.....	321	
Transferred to the Reserve.....	4,637	
Missing in action.....	5	
	<hr/>	27,912

Aggregate.....	<hr/>	<hr/>	28,028
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As will be seen from the foregoing table, but 5,793 enlisted men were discharged from the Regular Army upon expiration of term of service during the year. This small number of discharges upon expiration of service is the result of the act of August 24, 1912, which provided that after November 1, 1912, all enlistments in the Regular Army should be for a period of seven years, four years with the

colors and three years in the Reserve, or the soldier may be furloughed to the Reserve after an active service of three years. In order to reenlist for active service, he must serve four years with the colors. Consequently, the only discharges occurring during the year upon expiration of term of service were of those men who enlisted prior to November 1, 1912. The number (4,626) furloughed to the Reserve during the fiscal year 1916 should be included in the separations from service upon expiration of term of enlistment, for even though they have not been actually discharged, they have completed the term of active service for which enlisted. If this number be added, the total number of separations from active service because of completion of term of enlistment, or that part of it calling for active service, is 10,419. During the preceding fiscal year the number of discharges upon expiration of term of service was 27,020, and during the fiscal year 1914 it was 25,027. Those numbers are, respectively, 8.4, 19.7, and 20 per cent of the whole number of enlisted men in service or of enlistment contracts in force during each of those years.

The losses from all causes other than completion of term of active service among enlisted men of the Regular Army during the fiscal year ended June 30, 1916, numbered 17,065, but from this number should be deducted the number (2,442) of deserters that returned to military control during the year, leaving 14,623 as representing the number of losses during the year from causes other than completion of term of active service. During the preceding fiscal year those losses were 14,517, and during the fiscal year ended June 30, 1914, they were 12,487. Those numbers are, respectively, 13.4 (or 11.8, if the number gained from desertion is deducted from the total losses from desertion), 10.6, and 9.97 per cent of the whole number of enlistment contracts in force during the year.

DESERTIONS.

As shown by the official returns, the number of desertions from the Army during the fiscal year ended June 30, 1916, aggregated 3,856, which is 3.10 per cent of the whole number of enlistment contracts in force during the year. This is a slight decrease as compared with the percentage (3.23) for 1915. The number of reported desertions during the year 1916 is 579 less than the number reported during 1915 and 595 less than the number reported in 1914.

Of the 3,856 cases of reported desertion during the year, 200 were declared erroneous; 2 of the men so reported were tried and acquitted of the charge, and 580 were tried and found guilty of the lesser offense of absence without leave, making a total of 782 cases improperly classed as desertions. If this number be deducted from the 3,856 reported desertions, as shown by the returns, there remain but 3,074 cases, or 2.47 per cent, of actual desertions. However, this figure does not represent the actual number of desertions occurring during the year, because it is impossible at this time to even estimate the number of the men now regarded as deserters that will come under military control and be acquitted of the charge or be convicted of the lesser offense of absence without leave before the statute of limitations will apply in their cases. Under the law now in operation the trial of the men who enlisted and deserted during the fiscal year 1916 will not be barred by the statute of limitations until some time during

the fiscal year 1925. Unless it can be assumed that all men reported as deserters during the year who do not return to military control or have not been tried before the annual report for that year is published can be classed as deserters, the actual number of desertions during a year can not be stated in the report for that year. As cases have arisen in which men have been convicted of absence without leave after having been absent more than two years from the date of their reported desertion, no such assumption is possible. As the figures hereafter given in this report are comparative, and because it is impossible to determine at this time how many of the men dropped as deserters during the year will ultimately be regarded as such, the number of reported desertions as shown by the returns will be used.

A comparison of the percentages of reported desertions in each of the past 20 years is shown in the following table:

Fiscal years.	Percentage deserted.	Fiscal years.	Percentage deserted.
1916.....	3.10	1906.....	7.43
1915.....	3.23	1905.....	6.79
1914.....	3.10	1904.....	6.61
1913.....	4.15	1903.....	7.10
1912.....	3.00	1902.....	5.00
1911.....	2.28	1901.....	4.12
1910.....	3.66	1900.....	4.09
1909.....	4.97	1899.....	3.22
1908.....	4.59	1898.....	1.57
1907.....	5.62	1897.....	3.13

The following table shows the percentages of desertions occurring in each of the several periods of service during the past three years:

Period of service in which desertion took place.	Percentage of whole number of desertions.		
	Year ended June 30, 1916.	Year ended June 30, 1915.	Year ended June 30, 1914.
First 3 months of service.....	10	13	18
Second 3 months of service.....	11	17	19
Third 3 months of service.....	10	14	14
Fourth 3 months of service.....	8	10	7
First year of service.....	39	54	58
Second year of service.....	24	20	18
Third year of service.....	9	5	5
Fourth year of service.....	(¹)		
First enlistment.....	72	79	81
Second enlistment.....	21	16	13
Third enlistment.....	4	3	3
Fourth enlistment and subsequent enlistments.....	3	2	3
Total.....	100	100	100

¹ During the year 1916 there were 10 desertions during the fourth year of service, but as that number is less than one-third of 1 per cent, it is not shown in this table. During the preceding years the enlistment period ended at the expiration of 3 years.

During the fiscal year ended June 30, 1916, there was a material decrease in the percentage of desertions occurring in the first year of service, the percentages for the years 1916, 1915, and 1914, being, respectively, 39, 54, and 58 per cent. This decrease is due no doubt

to the fact that during the first eight months of the year 1916 the original enlistments were comparatively few, as the Army had been recruited to its authorized strength. Consequently, the total number of men serving in the first year of their enlistment period was much less than the number so serving during the years 1914 and 1915, and it naturally followed that the number of desertions during the first year of service was less in 1916 than in preceding years.

The percentages of desertions by branches of service during the fiscal years 1911-1916 are shown in the following table:

Branches of service.	Percentages.					
	1916	1915	1914	1913	1912	1911
Hospital Corps.....	4.15	4.64	3.34	4.24	3.03	3.10
Coast Artillery Corps.....	3.78	3.72	3.48	4.19	3.38	2.42
Cavalry.....	3.53	3.87	3.48	4.53	2.95	1.92
Field Artillery.....	3.43	4.82	5.20	6.11	4.07	2.93
Engineers.....	2.58	4.08	2.94	4.68	4.26	3.09
Infantry.....	2.48	2.28	2.49	3.95	2.37	1.85
All others, including unassigned recruits.....	2.82	3.12	2.68	3.18	3.32	2.85
The Army.....	3.10	3.23	3.10	4.15	3.00	2.28

The foregoing statement shows a decrease in the percentage of desertions during the last fiscal year over the year 1915 in each branch of the service except the Infantry, in which there is a slight increase.

As in the preceding reports, the percentages of desertions hereinbefore shown are based on the whole number of enlisted men who were in service at any time during the year, and not on an average enlisted strength. All the losses during the year are included in the basic figures used, and those figures represent the whole number of enlisted men who might have become deserters or the whole number of enlistment contracts that might have been terminated by desertion at some time during the year. It is clearly improper to use as a basis for calculating the percentages of desertions a strength obtained by averaging the number of men in service at the end of each month of the year—a number that does not include men who went out of service during the year, and even does not include the deserters themselves. If, however, the average enlisted strength is used as a basis, it is found that the number of desertions from the enlisted force of the Army during the year ended June 30, 1916, was 4.07 per cent of the strength as against 4.76 per cent during the preceding fiscal year, 4.55 during the year 1914, and 5.48 during the year 1913.

An examination of the returns for the fiscal year ended June 30, 1916, was made for the purpose of ascertaining what organizations serving within the continental limits of the United States had the lowest and highest relative number of desertions. It should be borne in mind that in the following paragraphs, showing the results of that examination, the organizations that served a part or the whole of the year in Hawaii, Alaska, the Canal Zone, China, or the Philippine Islands are not taken into consideration, because in those regions it is unusually difficult for a deserter to make good his escape from military control, and consequently the number of desertions that occur there are so small as to be of no importance for the purpose of this report.

The regiments serving in the United States that had the lowest percentages of desertions during the year were the Twenty-sixth Infantry, Tenth Cavalry, and Twenty-fourth Infantry, the first-mentioned regiment being a white organization, while the other two were colored organizations. The desertions from those regiments are 1.46, 1.50, and 1.81 per cent, respectively, of the whole number of enlisted men in the service, or enlistment contracts in force, in those regiments during the year. The Tenth Cavalry was one of the two regiments having the lowest percentage of desertions during the years 1910 to 1915, inclusive, the percentages for those years being 1.52, 0.78, 1.52, 1.99, 1.42, and 1.17, respectively.

As was the case during the years 1914 and 1915 the Third Field Artillery had the lowest percentage of desertions of any regiment of that arm serving in the United States, the percentages of desertion for that regiment being 3.96 for the year 1916, 4.57 for 1915, and 5.19 for 1914.

The three regiments that had the highest percentage of desertions were the Twenty-first Infantry, First Cavalry, and Eleventh Infantry, the percentage of desertions from those organizations being 11.12, 9.16, and 6.35 per cent, respectively.

Of the white troops 3.72 per cent and of the colored troops 0.96 per cent were reported as deserters, as compared with 3.10 for the whole Army. The percentages for the fiscal year 1915 were: White troops, 3.40, and colored troops, 0.44.

The following table shows for each month of the fiscal years 1914, 1915, and 1916 the percentages of the total number of desertions occurring during each of these years:

Months.	Fiscal years.			Months.	Fiscal years.		
	1916	1915	1914		1916	1915	1914
July.....	12.16	10.30	9.70	February.....	5.91	5.84	6.02
August.....	12.52	11.41	10.52	March.....	5.37	7.08	8.96
September.....	10.43	9.56	8.17	April.....	6.92	9.43	9.20
October.....	8.58	8.12	8.56	May.....	7.49	10.35	9.31
November.....	7.06	5.89	6.73	June.....	12.68	11.23	11.48
December.....	5.50	5.79	5.70				
January.....	5.38	5.00	5.65	Total.....	100.00	100.00	100.00

That nationality is not an important factor in considering the subject of desertions from the Army was again emphasized by the fact that during the past fiscal year the ratio of foreign-born deserters to the whole number of deserters was approximately the same as the ratio of foreign-born men who have enlisted during the past three years to the total number of enlistments during that period.

Reports of return of deserters and escaped prisoners to military control during the fiscal year ended June 30, 1916, were received in 2,501 cases, not including 52 cases in which the deserters were found to be not amenable to trial because of the statute of limitation. Of the 2,501 returned to military control during the year, 997, or 39.86 per cent, surrendered themselves, and 1,504, or 60.14 per cent, were apprehended. Of the latter number 706 were apprehended by the municipal police, 390 by sheriffs or other county officers, 181 by private detective agencies, 122 by the military authorities, including

those identified by finger-print records in The Adjutant General's Office, 28 by officers in charge of penal institutions, 25 by United States marshals and their deputies, 13 by railroad police, 12 by naval authorities, 11 by civilians (not civil officers), 7 by State detectives or police, 5 by Mexican authorities, and 4 by immigration officers. Of the total number apprehended during the year 46.94 per cent were apprehended by the municipal police, 25.93 per cent by county officers, 10.03 per cent by private detectives or detective agencies, 8.11 per cent by the military authorities.

The disposition of the 2,501 men returned to military control during the year is shown in the following table:

Disposed of without trial:

Charge removed as erroneous under paragraph 131, Army Regulations.....	200	
Restored to duty.....	5	
Discharged under paragraph 148½, Army Regulations.....	123	
Discharged on surgeon's certificate of disability.....	1	
Escaped.....	13	
Died.....	2	
Dropped, turned over to Navy.....	2	
	<hr/>	346

Tried by court-martial:

Acquitted.....	2	
Convicted of absence without leave—		
Not sentenced to discharge.....	486	
Dishonorably discharged.....	84	
Sentence of dishonorable discharge mitigated by reviewing authority.....	1	
Sentence of dishonorable discharge disapproved by reviewing authority.....	3	
Sentence of dishonorable discharge suspended and restored to honorable duty.....	2	
Sentence of dishonorable discharge suspended, sentence uncompleted.....	4	
Convicted of desertion—		
Not sentenced to discharge.....	77	
Sentence of dishonorable discharge mitigated by reviewing authority.....	10	
Sentence of dishonorable discharge disapproved by reviewing authority.....	6	
Restored to honorable duty after being sentenced to dishonorable discharge.....	59	
Sentence of dishonorable discharge suspended, sentence uncompleted.....	220	
Dishonorably discharged and confined.....	1,032	
	<hr/>	1,986

Reports of results of trial not yet received..... 169

Total..... 2,501

It will be seen from the foregoing table that of the men tried for desertion 646 have been retained in service (61 after having been sentenced to dishonorable discharge), 224 have been sentenced to dishonorable discharge with that part of sentence suspended and remaining unexecuted at date of this report, and 1,116 have been dishonorably discharged.

The lengths of sentences of confinement as approved in cases of men dishonorably discharged, not including men restored to honorable duty or serving under suspended sentences of dishonorable discharge, are shown in the table following.

Less than 3 months.....	8
3 to 6 months.....	226
7 to 12 months.....	16
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Less than 1 year.....	250
1 year.....	425
1½ years.....	283
2 years.....	83
2½ years.....	24
3 years.....	17
3½ years.....	3
4 years and over.....	7
<hr/>	
No sentence of confinement.....	1,092
	24
<hr/>	
Total.....	1,116

RESTORATION OF CITIZENSHIP AND REENLISTMENT OF MEN WHOSE SERVICE DURING THE LAST PRECEDING TERM OF ENLISTMENT WAS NOT HONEST AND FAITHFUL.

Applications were received during the year from 141 deserters for restoration of the rights of citizenship under the provisions of the act of Congress approved August 22, 1912 (37 Stat. L., 356). Favorable action was taken upon all of these applications.

Pursuant to the provisions of the act cited, the enlistment (under certain conditions) of former soldiers whose service during their preceding terms of enlistment was not honest and faithful was continued during the fiscal year ended June 30, 1916. Of the 1,431 applications for permission to enlist again received during the year from such former soldiers 99 were favorably considered, 1,182 were denied, either because the offenses for which the soldiers had been discharged were of such a nature as to preclude their enlistment or because their conduct while in service or after discharge had not been such as to warrant favorable consideration, and 150 applications had not been finally acted upon because evidence or reports needed for an intelligent consideration of the applications had not been received in this office. During the year 45 men who had been granted permission to reenlist (17 of them being former deserters) availed themselves of the privilege. In addition 1 man (a former deserter) was reenlisted at the United States Disciplinary Barracks, Fort Leavenworth, under standing authority given to the commandant, a total of 46. Of these, 1 (a former deserter) has deserted, 1 has been discharged under paragraph 148½, Army Regulations, and 44 (17 of them former deserters) were serving with their organizations on June 30, 1916.

Of the 204 former soldiers (91 of them former deserters) referred to in the last annual report as having enlisted during the fiscal years 1914 and 1915 after a prior service that was not honest and faithful, 1 has died while absent in desertion, 37 (13 of them former deserters) have been dishonorably discharged, 2 have been discharged without honor, 18 (8 of them former deserters) have been discharged under paragraph 148½, Army Regulations, 2 (1 of them a former deserter) have died while in service, 14 (7 of them former deserters) have been honorably discharged—2 with the rank of corporal, 14 (9 of them former deserters) were absent in desertion at the close of the fiscal year 1916, 1 was serving sentence (dishonorable discharge suspended) for desertion, 1 (a former deserter) was present awaiting trial for deser-

tion, and 114 (52 of them former deserters) were on duty with their organizations at that time—16 with the rank of corporal, 1 with the rank of electrician sergeant, second class, 3 with the rank of sergeant, 1 with the rank of first sergeant, and 1 with the rank of sergeant, first class.

The total number of these reenlistments prior to the close of the fiscal year 1916 is 250.

In tabulated form the results appear as follows:

	1914	1915	1916	Totals.
Reenlisted.....	(34) 93	(57) 111	(18) 46	(109) 250
Honorably discharged.....	(5) 10	(2) 4	.....	(7) 14
Died.....	(1) 1	.....	.....	(1) 2
Dishonorably discharged.....	(4) 21	(9) 16	.....	(13) 37
Discharged without honor.....	.....	1	.....	2
Discharged under par. 148½, Army Regulations.....	6	(8) 12	1	(8) 19
Died in desertion.....	1	.....	.....	1
Absent in desertion, June 30, 1916.....	(4) 5	(5) 9	(1) 1	(10) 15
Serving sentence (dishonorable discharge suspended) for deser- tion, June 30, 1916.....	.....	1	.....	1
Present, awaiting trial for desertion, June 30, 1916.....	(1) 1	.....	.....	(1) 1
Present for duty, June 30, 1916.....	(19) 47	(33) 67	(17) 44	(69) 158
Totals.....	(34) 93	(57) 111	(18) 46	(109) 250

NOTE.—Figures in parentheses indicate number of men who were convicted of desertion prior to reenlistment.

DISCHARGES OF ENLISTED MEN BY ORDER.

Of the 8,051 discharges by order, as shown in the table opposite page 24 of this report, 602 (not including 17 discharged upon surgeon's certificate of disability) were discharged under the provisions of paragraph 148½, Army Regulations, which provides for the discharge of enlisted men who are inapt, or who do not have the required degree of adaptability, or who have undesirable traits of character; 5,747 were discharged by purchase under rules governing such discharge, and the remaining 1,702 were discharged for various causes, the principal ones being on account of fraudulent enlistment, desertion, imprisonment by the civil authorities, to enter the Soldiers' Home, and for the convenience of the Government.

Of the discharges by purchase ordered, 611 were ordered by the War Department, 2,953 by the commanding general, Eastern Department, 132 by the commanding general, Central Department, 1,251 by the commanding general, Southern Department, 169 by the commanding general, Philippine Department, 272 by the commanding general, Hawaiian Department, and 359 by the commanding general, Western Department.

Of the discharges under paragraph 148½ ordered during the year 276 were ordered by the War Department, 137 by the commanding general, Eastern Department, 6 by the commanding general, Central Department, 71 by the commanding general, Southern Department, 36 by the commanding general, Western Department, 2 by the commanding general, Philippine Department, and 44 by the commanding general, Hawaiian Department.

Under the provisions of paragraph 139, Army Regulations, a commander of a territorial department or mobilized division is authorized to discharge enlisted men by purchase, on account of desertion or imprisonment by civil court or under paragraph 148½, Army Regulations.

DISCHARGES ON SURGEON'S CERTIFICATE OF DISABILITY.

It appears from the official returns that 1,329 enlisted men of the Regular Army were discharged on surgeon's certificate of disability during the year. This number is larger than the number (1,168) discharged during the preceding year, and was also larger than the number (1,004) discharged during the fiscal year 1914.

The number of discharges for disability is larger during the year 1916 than during any of the three preceding years, and based on the number of enlistment contracts in force during the respective years, the percentage is greater for the year 1916 than for either of the three preceding years, the percentage being 1913, 0.99; 1914, 0.80; 1915, 0.85; and 1916, 1.06.

An examination of the records shows that 691 of the 1,329 discharges on surgeon's certificate of disability during the past fiscal year were based on disabilities that existed prior to enlistment. Of the 1,168 men discharged on surgeon's certificate of disability during the preceding year 707 were discharged because of disability existing prior to enlistment, and during the year 1914, out of a total of 1,004 discharges of this class, 545 were discharged because of disabilities that existed prior to enlistment. These items in terms of percentage for the past three years are as follows: 1916, 52.0; 1915, 60.6; and 1914, 54.2. The percentage of discharges on account of disability existing prior to enlistment was less during the past year than it was during any of the three preceding years.

THE ADJUTANT GENERAL'S DEPARTMENT.

The total number of officers of The Adjutant General's Department remained unchanged during the fiscal year. Of the 23 officers constituting the department, 4 are permanent and 19 are detailed from the line of the Army. Three of the detailed officers were relieved and were replaced by other officers during the year. One permanent officer of the department was retired and his place was filled by the detail of an officer.

The act of June 3, 1916, provides for an increase of 27 officers of The Adjutant General's Department, but none of the increase authorized was for the fiscal year 1916.

THE MILITARY ACADEMY.

On June 30, 1916, there were under assignment to duty at the United States Military Academy 99 commissioned officers (including 7 professors, 2 acting professors, and 2 associate professors), 1 librarian, 1 master of the sword, 1 teacher of music, 4 civilian instructors in languages, and 2 civilians employed as instructors in fencing, broadsword exercise, and military gymnastics, a total of 108. This is a decrease of 7 since July 1, 1915, the date of the superintendent's report for that year.

On September 1, 1915, there were 630 cadets on the rolls, including 4 Filipino cadets and 2 foreign cadets from China. Between September 1, 1915, and September 1, 1916, 39 cadets were discharged for deficiency in studies; 1 was discharged for deficiency in

conduct; 1 was discharged for deficiency in studies and in conduct; 8 were discharged by reason of physical disability; 15, including 1 foreign cadet, from China, resigned; 125, including 1 Filipino cadet, were graduated; and 1 was accidentally drowned. In June, 1916, 158 cadets were admitted; in July, 1916, 164 cadets, including 1 foreign cadet, from Cuba, were admitted; and in August, 1916, 3 were admitted. Four ex-cadets, who were reappointed, with the approval of the academic board, were also admitted in August, 1916.

On September 1, 1916, the beginning of the current academic year, there were 769 cadets on the rolls, including 4 Filipino cadets and 2 foreign cadets—1 from China and 1 from Cuba. Those cadets were divided among the four classes, as follows: First class, 141; second class, 156; third class, 147; and fourth class, 325.

The usual examination of candidates for admission to the Military Academy was held at various military posts, beginning March 21, 1916. An additional examination was held, beginning June 6, 1916, with a view to fill the 102 vacancies that existed after the regular examination, and also to fill the vacancies (166) in the first annual increment of the increase in the Corps of Cadets provided for by the act of Congress approved May 4, 1916 (Public, No. 191, 64th Cong.). Inasmuch as it became apparent that not enough cadets to fill the vacancies in the first increment would be obtained from this examination it was decided to hold still another examination (physical) on June 27, 1916, mental qualification being by certificate only. The total number of candidates designated for the three examinations was 1,228. Of that number, 202 failed to report for examination; 12 declined appointment, their appointments were canceled or they were prevented by sickness from reporting; 109 failed to complete the mental or physical examination, or both; 515 were rejected upon mental or physical examination, or upon both; 1 was refused admission because of cribbing, and (at the June 27 examination) 2 qualified physically and failed to submit educational certificates. There were no vacancies for 58 alternates and 5 candidates at large who qualified. The remaining 324 candidates were found qualified and were admitted to the academy.

The act of Congress approved May 4, 1916, referred to above, authorized an increase of 664 in the Corps of Cadets. It is prescribed that that increase shall be divided into four annual increments, each increment to be as nearly equal as practicable. After the examination of June 27 there were 26 vacancies in the first increment.

The number of cadets authorized for 1916 is 834. There were 767 cadets on the rolls (excluding the two foreign cadets) on September 1, 1916, leaving 67 vacancies on that date. That number has been increased by resignations and death, so that the number of vacancies now is 75. The number of cadets authorized for 1917 is 1,000; for 1918, 1,166; and for 1919, 1,332.

Information concerning the operation of the several academic departments, the enlarging of the Military Academy, discipline of the Corps of Cadets, and other matters of interest are to be found in the Annual Report of the Superintendent of the United States Military Academy. As it is customary to print that report with the other reports of the War Department, further reference to those subjects is omitted from this report.

RECRUITING FOR THE REGULAR ARMY.

The general recruiting detail for the Regular Army at the beginning of the fiscal year 1916 consisted of 124 commissioned officers and 636 enlisted men. At the end of that year the detail consisted of 126 officers and 1,077 enlisted men. Included in the number of commissioned officers so detailed at the end of the year are 66 officers regularly on duty at general recruit depots and 60 officers on duty at recruiting stations. In the last mentioned number are included 30 retired officers detailed on active duty under the provisions of the act of Congress approved April 23, 1904 (33 Stat. L., 264). Due to the increase in the strength of the Army authorized by the joint resolution of Congress approved March 17, 1916, and the act of Congress approved June 3, 1916, and the consequent necessity for securing the number of recruits authorized, the recruiting personnel has been increased in number 443, the increase consisting of 2 commissioned officers and 441 enlisted men.

At the beginning of the fiscal year 84 central recruiting stations were maintained, and on June 30, 1916, there were 189. Of the latter number, 54 were main stations, each in charge of a recruiting officer, and the remainder were stations auxiliary to the main stations. In three recruiting districts additional commissioned officers are assigned to assist the recruiting officer in charge, New York having 3 and Chicago and San Francisco having 1 each of such additional officers. An additional main station and recruiting district, with a commissioned officer in charge, was also authorized at Houston, Tex., within the fiscal year covered by this report, but the station was not fully opened for business until after the close of the fiscal year. In addition to the main and auxiliary stations, temporary stations were opened and maintained after the increase in the Army was authorized in order to canvass more thoroughly the territory embraced in the various recruiting districts within the United States.

Within the fiscal year 1915 the largest number of stations of all kinds—main, auxiliary, and temporary—maintained in any one month was 270, and the smallest number was 94. Within the fiscal year covered by this report the corresponding numbers were 366 and 94, respectively. In this connection, it may be remarked that prior to the increase of the Army authorized, the average number of stations maintained was not increased, although, due to the activity of the officers and enlisted men on recruiting duty, a sufficient number of recruits were secured to keep the Army filled to the strength then authorized. As a matter of fact, prior to the increase authorized March 17, 1916, the number of recruits secured in excess of the number required to fill existing vacancies caused a practical cessation of recruiting in some arms of the service.

The practice maintained for several years of sending applicants for enlistment, accepted at the recruiting stations, to the recruit depots for physical examination and enlistment was continued throughout the past fiscal year with the same satisfactory results experienced in preceding years.

Included in the term "reenlistments" in this report are those former soldiers who enlist again within three months of the date of termination of their prior service and are thereby entitled, under existing law, to three months' additional pay, on second enlistment and continuous-service pay on any such enlistment, while under the term "enlist-

ments" are included men of no previous service and also those men who having had former service did not enlist again within three months from the date of the termination of their former service.

Within the fiscal year 1916 enlistments and reenlistments for the Regular Army numbered 27,468, including 25,450 for the line of the Army, 601 for the Hospital Corps (now Medical Department), 329 for the Quartermaster Corps, 374 for other staff departments, and 714 for the Philippine Scouts. The enlistments numbered 22,182, including enlistments of 3,238 men with former service. Of these enlistments, 21,002 (2,920 with former service) were for the line of the Army, 412 (92 with former service) for the Hospital Corps or Medical Department, 116 (71 with former service) for the Quartermaster Corps, 201 (66 with former service) for other staff departments, and 451 (89 with former service) for the Philippine Scouts. The reenlistments numbered 5,286, of which 4,448 were for the line of the Army, 189 for the Hospital Corps or Medical Department, 213 for the Quartermaster Corps, 173 for other staff departments, and 263 for the Philippine Scouts.

With very few exceptions, rendered necessary by the demands of regiments stationed on the Mexican border, the plan authorized by the Secretary of War several years ago of furnishing recruits to organizations semiannually, was adhered to throughout the past fiscal year.

The total number of those who applied for enlistment in the Army in each recruiting district, the number of such applicants accepted or rejected in each district, and the number of accepted applicants afterward rejected at recruiting depots are set forth in the following table:

Recruiting districts.	Number of applicants accepted.	Number of applicants rejected.	Total number of applicants.	Applicants accepted at stations and subsequently rejected at depots and depot posts.
.....	190	807	997	21
.....	761	1,520	2,281	55
.....	320	1,016	1,336	52
.....	322	2,561	2,883	29
.....	467	3,154	3,621	28
.....	892	3,119	4,011	123
.....	3,748	9,702	13,450	443
.....	550	1,353	1,903	48
.....	709	911	1,620	73
.....	231	954	1,185	15
.....	382	1,099	1,471	79
.....	254	1,245	1,499	20
.....	365	2,891	3,256	77
.....	595	1,698	2,293	71
.....	845	702	1,547	43
h.....	171	708	879	12
.....	243	440	683	34
b.....	339	1,573	1,912	26
.....	973	2,260	3,233	129
.....	410	1,543	1,953	43
.....	743	1,066	1,809	61
.....	350	1,829	2,179	30
.....	398	909	1,307	51
.....	306	923	1,229	31
.....	365	1,068	1,433	21
Louisville, Ky.....	387	1,459	1,846	56
Memphis, Tenn.....	251	1,139	1,390	20
Minneapolis, Minn.....	605	1,928	2,533	50
Nashville, Tenn.....	308	782	1,090	40
Newark, N. J.....	206	1,333	1,539	71
New Haven, Conn.....	315	1,224	1,539	47
New Orleans, La.....	360	1,200	1,560	24
New York, N. Y.....	3,580	12,209	15,789	681
Oklahoma, Okla.....	283	1,290	1,573	36
Omaha, Nebr.....	368	1,010	1,378	57
Pearla, Ill.....	394	755	1,149	57

Recruiting districts.	Number of applicants accepted.	Number of applicants rejected.	Total number of applicants.	Applicants accepted at stations and subsequently rejected at depots and depot posts.
Philadelphia, Pa.....	837	2,190	3,027	175
Pittsburgh, Pa.....	353	2,173	2,526	34
Portland, Me.....	175	576	751	38
Portland, Oreg.....	353	1,347	1,700	44
Providence, R. I.....	289	1,250	1,539	48
Richmond, Va.....	277	488	765	43
Roanoke, Va.....	186	482	668	17
St. Louis, Mo.....	1,476	3,865	5,341	211
Salt Lake City, Utah.....	157	864	1,021	28
San Francisco, Cal.....	2,937	12,595	15,532	525
Savannah, Ga.....	532	2,221	2,753	18
Scranton, Pa.....	261	968	1,229	56
Seattle, Wash.....	150	404	554	10
Spokane, Wash.....	201	410	611	26
Syracuse, N. Y.....	227	1,171	1,398	31
Terra Haute, Ind.....	398	723	1,121	55
Toledo, Ohio.....	339	1,163	1,502	31
Wichita, Kans.....	292	925	1,217	51
Total.....	30,993	102,097	133,090	4,194

Analysis of the preceding table shows that 23 per cent of those who applied for enlistment at recruiting stations were accepted and that 13 per cent of the accepted applicants were afterward rejected at depots. These items for the preceding fiscal year were 26 per cent and 13 per cent, respectively.

The following table shows the number of enlistments for the Regular Army and the number of applicants rejected at the recruit depots and other military posts and in the field within the fiscal year 1916:

Station or post.	Number enlisted.	Number rejected.	Total number examined.
General recruiting stations.....	193	.....	193
Recruit depots:			
Columbus Barracks, Ohio.....	5,611	768	6,379
Jefferson Barracks, Mo.....	6,667	1,080	7,747
Fort Logan, Colo.....	1,234	328	1,562
Fort McDowell, Cal.....	2,416	549	2,965
Fort Slocum, N. Y.....	5,066	1,322	6,388
Total.....	20,994	4,047	25,041
Depot posts:			
Fort Bliss, Tex.....	69	1	70
Fort Douglas, Utah.....	8	1	9
Fort George Wright, Wash. ¹	161	6	167
Jackson Barracks, La. ²	228	25	253
Fort Lawton, Wash. ³	268	10	278
Fort Oglethorpe, Ga. ⁴	603	54	657
Fort Sam Houston, Tex.....	187	19	206
United States Disciplinary Barracks, Fort Leavenworth, Kans.....	29	6	35
Vancouver Barracks, Wash. ¹	279	48	327
Total.....	1,832	170	2,002
Military posts (other than depot posts).....	2,296	125	2,421
In the field.....	1,319	29	1,348
Porto Rico Regiment of Infantry.....	120	16	136
Aggregate.....	26,754	4,387	31,141

¹ Discontinued as depot post May 12, 1916.
² Discontinued as depot post May 11, 1916.

³ Discontinued as depot post May 17, 1916.
⁴ Discontinued as depot post Mar. 12, 1916.

The foregoing table does not include 714 enlistments and 197 rejections for the Philippine Scouts. Including those, the aggregate number of enlistments for the entire Regular Army within the fiscal year was 27,468 and the total number of rejections 134,149, of which 102,097 were rejected at the recruiting stations, 4,387 at recruit depots, and 197 for the Philippine Scouts. This makes an aggregate of 161,617 enlistments and rejections for the entire Regular Army within the fiscal year.

Of the rejected applicants, 14,987 were rejected because of minority, 2,728 because they were aliens, and 3,537 because of illiteracy. Of the accepted applicants 2,196 declined to enlist at depots or eloped en route thereto.

The race and nativity of those enlisted and reenlisted in the Army within the fiscal year 1916 are set forth in the following table:

Race and nativity.	Regular Army.					Philip- pine Scouts.	Aggre- gate.
	Line of Army.	Staff de- partments, not includ- ing Hospi- tal Corps and Quar- master Corps.	Medical Depart- ment.	Quarter- master- Corps.	Total.		
Native white:							
Enlistments.....	18,243	190	367	98	18,898	.....	18,898
Reenlistments.....	3,305	137	146	166	3,754	.....	3,754
Total.....	21,548	327	513	264	22,652	.....	22,652
Foreign white:							
Enlistments.....	2,136	11	43	16	2,206	.....	2,206
Reenlistments.....	657	36	32	36	761	.....	761
Total.....	2,793	47	75	52	2,967	.....	2,967
Colored:							
Enlistments.....	562	.....	2	2	566	.....	566
Reenlistments.....	413	.....	11	11	435	.....	435
Total.....	975	.....	13	13	1,001	.....	1,001
Indians:							
Enlistments.....	14	.....	.....	.....	14	.....	14
Reenlistments.....	.....	.....	.....	.....	.....	.....	.....
Total.....	14	.....	.....	.....	14	.....	14
Porto Ricans:							
Enlistments.....	47	.....	.....	.....	47	.....	47
Reenlistments.....	73	.....	.....	.....	73	.....	73
Total.....	120	.....	.....	.....	120	.....	120
Filipinos:							
Enlistments.....	.....	.....	.....	.....	.....	451	451
Reenlistments.....	.....	.....	.....	.....	.....	263	263
Total.....	.....	.....	.....	.....	.....	714	714
Total enlistments.....	21,002	201	412	116	21,731	451	22,182
Total reenlistments.....	4,448	173	189	213	5,023	263	5,286
Aggregate.....	25,450	374	601	329	26,754	714	27,468

Analysis of the last preceding table discloses that practically 90 per cent of the original enlistments of white soldiers were enlistments of natives of the United States. Within each of the three years last preceding that percentage was 86, 84, and 87, respectively.

The table following shows the number of enlistments and reenlistments monthly in the line of the Army within the three years ended June 30, 1916.

Months.	Fiscal year ended—								
	June 30, 1916.			June 30, 1915.			June 30, 1914.		
	Enlist-ments.	Reenlist-ments.	Total.	Enlist-ments.	Reenlist-ments.	Total.	Enlist-ments.	Reenlist-ments.	Total.
July.....	1,325	820	2,145	2,211	1,318	3,529	1,071	421	3,000
August.....	1,547	744	2,291	2,664	1,439	4,103	2,005	488	2,493
September.....	1,582	688	2,270	2,737	1,348	4,085	1,874	607	2,481
October.....	1,423	688	2,111	3,202	1,353	4,555	2,020	600	2,620
November.....	1,460	390	1,850	3,329	1,249	4,578	2,454	867	3,321
December.....	1,441	213	1,654	3,316	1,508	4,824	3,447	1,134	4,581
January.....	1,488	125	1,613	3,542	1,535	5,077	3,205	1,200	4,405
February.....	1,104	227	1,331	2,761	1,074	3,835	2,348	1,063	3,411
March.....	1,961	110	2,071	2,116	1,035	3,151	2,311	1,126	3,437
April.....	2,483	246	2,729	1,540	797	2,337	2,754	1,037	3,791
May.....	2,058	109	2,167	1,463	705	2,168	2,494	1,027	3,521
June.....	3,130	88	3,218	1,461	724	2,185	1,946	1,101	3,047
Total.....	21,002	4,448	25,450	30,342	14,085	44,427	28,560	10,005	38,565

The average total monthly enlistments, including reenlistments, derived from the foregoing table are as follows:

For the fiscal year 1914.....	3,270
For the fiscal year 1915.....	3,702
For the fiscal year 1916.....	2,121

The decrease observed in the number of enlistments and reenlistments is believed to be due to the following causes: First, the restriction on recruiting that prevailed for practically the first two thirds of the fiscal year, due to the fact that during that period the Army was practically filled. Second, during the last one third of the fiscal year when recruiting was stimulated for the purpose of obtaining the additional recruits provided by the legislation increasing the Army. Labor conditions throughout the country were such that all who desired to obtain employment in civil life readily obtained it with good wages. This prevented a sufficient number of recruits from enlisting after November 1, 1915. Third, the provisions of law that required that recruits who enlisted after November 1, 1912, should be given a full year from the date of enlistment before being eligible for reenlistment.

The number of recruits who were reenlisted by the Adjutant General's service was 10,005, as shown in the following table:

Branch	Number
Staff Department	1,000
Engineers	1,000
Cavalry	1,000
Field Artillery	1,000
Coast Artillery	1,000
Infantry	1,000
Missiles	1,000

The relative increase or decrease in the number of enlistments or reenlistments in the different branches of the service is more apparent when the numbers in the last preceding table are reduced to percentages of the total number of enlistments and reenlistments for each year compared. For that reason those percentages are shown in the table which follows:

Branches of service.	Percentages of total number of enlistments and reenlistments during the fiscal year ended—								
	June 30, 1916.			Jun , 30, 1915.			June 30, 1914		
	Enlist-ments.	Re-enlist-ments.	Total.	Enlist-ments.	Re-enlist-ments.	Total.	Enlist-ments.	Re-enlist-ments.	Total.
Staff departments.....	2.72	2.15	4.87	1.68	4.57	6.25	1.92	4.35	6.27
Engineers.....	1.17	.27	1.44	1.20	.62	1.82	.95	.66	1.61
Cavalry.....	25.76	3.01	28.77	15.41	4.90	20.31	20.96	4.21	25.17
Field Artillery.....	4.60	1.00	5.60	3.48	1.25	4.73	5.05	1.09	6.14
Coast Artillery Corps.....	21.50	4.66	26.16	15.54	8.40	23.94	15.62	6.73	22.35
Infantry.....	25.43	7.52	32.95	28.35	14.24	42.59	25.58	12.88	37.96
Miscellaneous.....	.04	.17	.21	.04	.32	.36	.05	.45	.50
Total.....	81.22	18.78	100.00	65.70	34.30	100.00	70.13	29.87	100.00

The comparison similar to that made in previous reports of the number of reenlistments in the several branches of the service with the authorized strength of those branches shows with greater accuracy the relative number of reenlistments. Therefore, the following table is presented showing the number of reenlistments to each 1,000 of the authorized enlisted strength of the several branches of the service within the three fiscal years last past:

Branches of service.	Number of reenlistments to each 1,000 of the authorized enlisted strength during the fiscal year ended June 30—		
	1916	1915	1914
Staff departments.....	49	171	178
Engineers.....	31	150	143
Cavalry.....	53	160	124
Field Artillery.....	46	105	83
Coast Artillery Corps.....	65	208	149
Infantry.....	42	158	126
Miscellaneous.....	73	24	30
The Army.....	49	167	139

The marked decrease in the relative number of reenlistments in each branch of the service within the past fiscal year is doubtless entirely due to the fact that existing law, as previously pointed out, precluded such reenlistments.

With the view of keeping fully informed as to the comparative efficiency of each of the various methods of advertising for recruits, the practice has been continued of requiring recruiting officers at stations to report whether the applications for enlistment made to them were, or were not, the result, wholly or in part, of any form of

advertising, and, if so, of what form. The number of applications reported to have been the result of each of the several methods of advertising during the fiscal year ended June 30, 1916, is as follows:

Methods of advertising.	Number of applications.
Sight of recruiting flag and station.....	50,011
In parks and squares.....	26,268
Recruiting posters.....	19,009
Canvass by recruiting parties.....	8,960
Recruiting circulars.....	6,970
Recruiting booklet, "The United States Army as a Career".....	4,445
Newspaper advertising.....	3,715
Special circulars issued by recruiting officers.....	3,350
Handbills.....	3,253
Electric signs (2 districts).....	500
Advertising cards.....	500
Personal letters from recruiting officers.....	480
News items in newspapers.....	446
Baseball team (1 district).....	416
Slides in moving-picture houses (5 districts)....	369
Signs on elevated stations (1 district).....	115
Postal cards.....	20
Booklet, "Experience of a Recruit in the United States Army".....	10
Photographs (1 district).....	8
Total.....	128,862
Not the result of advertising.....	4,080
Total number of applicants reported upon.....	132,942

¹ This number is 148 less than the whole number of accepted and rejected applicants shown by trimonthly reports of recruiting (p. 37), no reports having been received in that number of cases.

Within the fiscal year covered by this report, as in previous years, the sight of the recruiting flag and station proved the most prolific method of advertising for recruits, the park and square parties and the recruiting posters being second and third, respectively.

The recruiting booklet issued in 1914 has continued to be a very effective means of advertising and of conveying information relative to the advantages received from an enlistment in the Army. A new edition of this booklet has been authorized, amended to conform with the provisions of the act of Congress approved June 3, 1916.

Another booklet which has been and which, it is thought, will continue to be a potent method of advertising for the recruiting service is the "Experience of a Recruit," published by the department within the past fiscal year. This booklet relates in a very readable and attractive manner the experience of a recruit who enlisted at Columbus Barracks, Ohio, and details explicitly his experience while at the depot. The personal statement of the recruit was so forceful, truthful, and favorable to the Army that it was published by the department without comment.

Another publication prepared and issued in connection with recruiting for the Regular Army is the pamphlet entitled "Guide to Civil Employment for Ex-Soldiers." In connection with the preparation of this publication information was obtained from each recruiting officer throughout the United States relative to civil employment in the respective recruiting districts that might be open to former soldiers of the Army discharged with character at least "Good." A full list of these employments arranged by States is included in the publication, together with instructions describing the method by which prospective applicants, former soldiers, may get in touch with prospective employers.

A copy of this publication will be placed in all permanent mess and soldiers' reading rooms and a copy will be given to every man leaving the service whose character is not less than "Good." This guide to civil employment has received favorable comment from all to whose attention it has been brought and it is believed that it will prove to be of great utility to former soldiers in enabling them to obtain employment and will act as a stimulus to recruiting by pointing out to the prospective applicant for enlistment the advantages possible for vocational training in the Army and assuring him that the military authorities are prepared to aid him in applying that vocational training in civil pursuits after he shall have left the Army.

Immediately upon the authorization of the increase in the Army March 17, 1916, advertising for recruits, which prior to that time had been largely restricted, was greatly expanded. As previously stated many new stations were opened, largely increasing the number of the recruiting flags and stations. Special circulars were issued. Newspaper advertising was increased. Additional booklets were printed and the recruiting officers were instructed to work without regard to hours in the effort to obtain recruits.

Under the provisions of the act of Congress approved June 3, 1916, section 27, the President is authorized in his discretion to utilize the services of the postmasters of the second, third, and fourth classes in procuring the enlistment of recruits for the Army. For the purpose of carrying out the provisions of this law the matter has been taken up with the Post Office Department with the view of securing the cooperation of that department and of the postmasters concerned.

At the date of the preparation of this report information is not available from which a definite statement can be prepared showing the expense of the recruiting service for the fiscal year covered by this report, but constant effort has been maintained throughout the year to minimize expenses and eliminate all costs that were not absolutely required for the needs of the service. Telegraphic correspondence as heretofore has been carefully scrutinized with the view of reduction in tolls. The large number of recruiting stations previously maintained were kept closed during the greater portion of the fiscal year and were only reopened when the increase in the Army necessitated such reopening and a consequent increase in the recruiting personnel. Prior to that time the number of stations had been reduced greatly, with a consequent reduction in rentals, pay, and allowances for the personnel and other expenses incident to the maintenance of stations and the mileage expenses of officers.

As in previous years, applicants for enlistment who, after having been accepted at recruiting stations and sent to depots, fail through their own fault to enlist there, are required, when such applicants again apply at recruiting stations, to reimburse the Government for the expense incident to their former application and failure to enlist.

REGULAR ARMY RESERVE.

The act of August 24, 1912, provides for two classes of reservists—those furloughed to the Reserve after an active service of four years, or at the discretion of the Secretary of War after a service of three years, and those who were honorably discharged and voluntarily

enlisted in the Reserve. Enlistment contracts entered into prior to November 1, 1912, did not contain, under the provisions of the law referred to, any provision for service in the Reserve, and consequently no furloughs to the Reserve could take place prior to November 1, 1915. For convenience, those furloughed to the Reserve will be designated class A reservists and those who voluntarily enlist in the Reserve will be designated class B reservists. While all furloughs to the Reserve during the year were made under the provisions of the act before referred to, it is proper to add that the act of June 3, 1916, provides that the enlistment period after November 1, 1916, shall be seven years, three years with the colors and four years in the Reserve, with a provision that if a soldier is considered sufficiently trained he may be furloughed to the Reserve after an active service of one year.

Between November 1, 1915, and June 30, 1916, the number of men furloughed to the Reserve was 4,626. Of those, 1 was discharged to enable him to complete his naturalization as a citizen of the United States and to accept employment under the Government, 2 were discharged because they had been sentenced to imprisonment by a civil court, and 2 died of disease, leaving 4,621 class A reservists on June 30, 1916.

Because of conditions along the Mexican border, on May 17, 1916, the War Department directed that all furloughs to the Reserve at the expiration of three years active service, except in the cases of members of the Coast Artillery Corps, be suspended. Consequently, there were very few furloughs to the Reserve during the last month and a half of the past fiscal year, and the foregoing figure does not represent the number that would have been in the Reserve on June 30 last under normal conditions.

The act of June 3, 1916, authorizes the payment of \$2 per month to reservists and provides for their field training each year. This will enable the War Department to keep in closer touch with the reservists, and, as a physical examination is provided during their attendance at field training, the department will also be able to discharge the physically unfit. Heretofore members of the Reserve were carried as members of the organizations in which they were serving at the time of furlough, but now they are transferred or assigned to the arm or corps to which they belonged, and their records are sent to the commanding general of the military department in which they elect to reside. In the event of mobilization they are directed to report to the commanding general of the department in which they reside for assignment to organizations. On June 28, 1916, orders were issued to the several department commanders within the continental limits of the United States to mobilize the Regular Army Reserve, excepting members of the Coast Artillery Corps, for assignment to Regular Army units serving on the Mexican border in the Southern Department. No figures are available at this time from which the number of reservists who responded to the mobilization call can be ascertained, but it is purposed to give such figures in my next annual report.

On June 30, 1916, the class B reservists numbered 27 men. During the year 12 men enlisted in this class, and 4 were discharged upon expiration of service, making a net gain during the year of 8.

ENLISTED RESERVE CORPS.

For the purpose of securing a reserve of enlisted men for the Engineer, Signal, and Quartermaster Corps, and the Ordnance and Medical Departments, additional to those furloughed to the Reserve after completion of a term of active service in the Regular Army, an Enlisted Reserve Corps was authorized by section 55 of the act of June 3, 1916. The section referred to did not become effective until July 1, 1916.

The corps is to consist of such numbers of enlisted men of such grade or grades as may be designated by the President from time to time. The enlistments are to be for a period of four years and of grades similar to those prescribed for the Regular Army. Each member of the corps will be furnished with a certificate of enlistment by The Adjutant General of the Army, showing the rank and corps or department for which the recipient was enlisted. Regulations have been prepared for the administration of the corps and for the guidance of recruiting officers in procuring enlistments. Every effort will be made by this office to enlist men for the corps, and the result of those efforts will be submitted in the annual report for the fiscal year that will end June 30, 1917.

CAMPS OF INSTRUCTION.

Orders were issued early in the present calendar year to department commanders in the United States and Hawaii to make the necessary preparations for holding camps of instruction for officers and non-commissioned officers of the Organized Militia and joint camps for the several arms of the service of the Regular Army and the Organized Militia.

However, in view of the necessity for the dispatching of the greater part of the mobile Army in the United States to the Southern Department, for duty on the Mexican border, and the consequent lack of an adequate number of officers and troops of the Regular Army to conduct properly these camps, the instructions for the holding of the camps were rescinded with respect to all departments in the United States, except the Eastern Department. The commanding general of that department was authorized to hold such camps for the Cavalry of the Regular Army and Organized Militia as were practicable. Under this authority a camp of instruction for officers and noncommissioned officers of the Organized Militia was held at Fort Myer, Va., May 21-28, 1916, and a joint camp of instruction for the First Squadron, First Cavalry, Vermont National Guard (composed principally of cadets of the Norwich University), was held at Fort Ethan Allen, Vt., for about 10 days beginning June 4, 1916. As the reports of these camps have not as yet been received, no statement can be made at this time as to the number of officers and noncommissioned officers who attended these camps.

No reports have been received showing whether or not camps have been held in the Hawaiian Department.

JOINT COAST DEFENSE EXERCISES.

Joint coast defense exercises, participated in by the Regular Coast Artillery and the Coast Artillery Militia, were ~~to be held as follows:~~

EASTERN DEPARTMENT.

Fort Constitution, N. H.
 Fort H. G. Wright, N. Y.
 Fort Strong, Mass.
 Fort Warren, Mass.
 Fort Howard, Md.
 Fort Caswell, N. C.

Fort Williams, Me.
 Fort Greble, R. I.
 Fort Andrews, Mass.
 Fort Screven, Ga.
 Fort Moultrie, S. C.
 Fort Monroe, Va.

WESTERN DEPARTMENT.

Fort Winfield Scott, Cal.
 Fort Rosecrans, Cal.

Fort Worden, Wash.
 Fort Stevens, Oreg.

As the reports of the department commanders on these camps have not as yet been received in the War Department, a complete statement as to the number of troops of the Regular Army and of the Organized Militia participating in them can not be presented at this time.

CITIZENS' TRAINING CAMPS.

Owing to the satisfactory results obtained from camps of this character held in 1914 and 1915, and the enthusiasm displayed by those who participated therein, department commanders were authorized to establish similar camps for 1916, as follows:

EASTERN DEPARTMENT.

Plattsburg Barracks, N. Y.:

June 5 to July 2, senior division.

July 5 to August 8, junior division.

July 12 to August 8, senior division.

August 10 to September 6, senior division.

September 8 to October 5, senior division.

Fort Terry, N. Y.: July 5 to August 10, for students.

Fort Wadsworth, N. Y.: Six camps of two weeks' duration each, commencing May 28.

Fort Oglethorpe, Ga.:

May 3 to May 30, senior division.

June 3 to June 30, senior division.

July 5 to August 8, junior division.

Owing to the small enrollment for the July camp at Fort Oglethorpe, and the necessity for the use of the available Regular troops at other points in the department on account of the mobilization of the National Guard, the department commander terminated the camp for the junior division, but all men enrolled were accepted for the camps at Plattsburg.

CENTRAL DEPARTMENT.

Fort Benjamin Harrison, Ind.:

July 5 to August 4.

August 7 to September 6.

September 8 to October 5.

Under date of June 19, 1916, the commanding general, Central Department, was authorized to cancel the camps scheduled to be held at Fort Benjamin Harrison on account of the lack of Regular troops and the mobilization of the National Guard.

SOUTHERN DEPARTMENT.

Fort Sam Houston, Tex.: June 12 to July 8.

WESTERN DEPARTMENT.

Monterey, Cal.: July 10 to August 5.

American Lake, Wash.: August 14 to September 9.

Fort Douglas, Utah: August 21 to September 16.

As most of the reports of the camp commanders have not been received, a compilation of the number of troops of the Regular Army and of the number of civilians participating in the camps can not be presented in this report.

SMALL-ARMS FIRING.

Because the regular target-practice season varies in the several departments, and in some instances extends to the close of the calendar year, it is impracticable to make a statement showing the results of the practice for the year 1916 in this report.

The numbers of qualifications in the several organizations of the line of the Army in the grades of expert rifleman, sharpshooter, and marksman since 1909 are shown in the following table:

Grades.	Years.						
	1909	1910	1911	1912	1913	1914	1915
Expert riflemen.....	2,875	2,151	1,211	1,312	1,627	2,180	3,539
Sharpshooters.....	9,790	8,857	7,326	9,323	11,144	8,236	7,586
Marksmen.....	5,815	5,741	5,196	6,307	7,121	12,423	20,995

Under paragraph 1345, Army Regulations, as amended by changes, Army Regulations, No. 43, War Department, July 24, 1916, "an enlisted man who qualifies hereafter as an expert rifleman is entitled to \$5 a month, as a sharpshooter to \$3 a month, and as a marksman to \$2 a month, in addition to his pay, from the date of qualification until the next opportunity to requalify, or for one year if no opportunity for requalification is presented within that year, provided that during that time he does not attain a higher qualification and that he continues to be a member of an organization armed with the rifle, in which qualification is authorized, or reenlists in such organization within three months from date of discharge therefrom."

The grade of expert revolver shot was established in revolver practice by the Provisional Small-Arms Firing Manual, 1909, and reports of results of revolver firing in the several organizations of the line of the Army during the target years 1910, 1911, 1912, 1913, 1914, and 1915, show, respectively, 810, 1,050, 1,335, 1,412, 981, and 1,476 qualifications in that grade. A silver badge is provided for each original qualification.

Paragraph 282, Small-Arms Firing Manual, 1913, provides that departmental rifle and pistol competitions shall be held in every alternate year. The Secretary of War has directed that they be held in the odd-numbered years, and, accordingly, those competitions will not be held in the year 1916.

There was held, however, in the Philippine Department, during this year, a department rifle competition for Philippine Scouts, the Secretary of War having directed that such competition be held in every

alternate year, commencing with the year 1916. In that competition there were 52 enlisted and 13 commissioned competitors, 14 of whom succeeded in winning medals.

The National Board for the Promotion of Rifle Practice has arranged for the holding of the national matches at State Camp, Jacksonville, Fla., to commence Friday, October 20, 1916, and has prescribed conditions and regulations for those competitions. Those conditions and regulations, having received the approval of the Secretary of War, were published in Bulletin No. 6, War Department, February 25, 1916. However, by reason of the exigencies of the service, it was decided in May, 1916, that there would be no participation therein by any teams, officers, or enlisted men of the Regular Army. This decision left to the adjutants general of the several States the matter of conducting the matches. Under date of September 13, 1916, it was decided by the Secretary of War, on recommendation of the Chief of the Militia Bureau, that the National Matches be held and that Col. Samuel W. Miller, Infantry, be detailed as executive officer of the matches.

The National Matches for the year 1915, comprising the national individual match, the national pistol match, and the national team match, were held at Jacksonville, Fla., October 18-22, under the supervision of Col. Richard M. Blatchford, United States Infantry, as executive officer, and Capt. William C. Harlee, United States Marine Corps, as assistant executive officer. The results of those matches have been published in Bulletin No. 3, War Department, February 7, 1916. In the national team match there were entered 2 teams, 1 Cavalry and 1 Infantry, from the Army, 1 team from the Marine Corps, 1 team from the South Carolina Military Academy cadets, and 40 teams from the Organized Militia. No teams were sent from the Organized Militia of California, Idaho, Michigan, Mississippi, Nebraska, Nevada, South Dakota, Texas, Virginia, or Washington.

The competing teams were divided into three classes, A, B, and C, upon the basis of their relative standing in the national team match of 1913, and prizes were awarded to each of the teams making the highest aggregate scores in each class.

The following table shows the winning teams, the scores made, and the prizes won in that competition:

Order.	Team.	Score.	Prize.
CLASS A.			
1	United States Army Infantry.....	3,646	National trophy and \$450. \$350. \$300. \$250.
2	United States Marine Corps.....	3,643	
3	United States Army Cavalry.....	3,598	
4	Massachusetts.....	3,587	
CLASS B.			
1	Pennsylvania.....	3,513	Hilton trophy and \$350. \$250. \$225. \$200.
2	Minnesota.....	3,512	
3	Illinois.....	3,559	
4	Wyoming.....	3,510	
CLASS C.			
1	Kentucky.....	3,518	Bronze soldier of Marathon and \$300. \$200. \$175. \$150.
2	North Carolina.....	3,498	
3	New Mexico.....	3,497	
4	Vermont.....	3,493	

A bronze medal was also awarded to each member of the winning teams, the medals for each class being of a different design.

The interest manifested by the militia in the national team matches is shown by the number of entries each year since the institution of those matches. Eleven State teams were represented in 1903, 19 in 1904, 32 in 1905, 37 in 1906, 43 in 1907, 45 in 1908, 43 in 1909, 38 in 1910 and in 1911, 41 in 1913, and 40 in 1915. It is observed that the maximum number of State teams represented was reached in 1908. There were no national team matches in 1912 and 1914.

The first prize in the national individual match—a gold medal and \$60—was won by Sergt. James S. Stewart, First Corps of Cadets, Massachusetts, with a score of 365, and the first prize in the national pistol match—a gold medal and \$30—was won by First Lieut. Jerry B. Garland, Third Indiana Infantry, with a score of 721.

DEMOBILIZATION OF THE SECOND DIVISION.

The Second Division, which was mobilized at Galveston and Texas City, Tex., in compliance with orders issued by the War Department, February 21 and 24, 1913, was ordered demobilized on October 18, 1915. Prior to the demobilization a hurricane occurred at the places named above which caused the death of 13 enlisted men and the destruction of the property of the troops encamped there.

Prior to the date of demobilization, the Twenty-seventh Infantry, one of the regiments of the Second Division, was sent to the Philippine Department for station, in place of the Twenty-fourth Infantry, returned to the United States.

By the date set for the demobilization, the remaining organizations of the Second Division were, on various dates in September and October, 1915, transferred to the Southern Department for duty along the border.

THE RAID ON COLUMBUS, N. MEX., AND THE PUNITIVE EXPEDITION.

On the night of March 8–9, 1916, the Mexican outlaw, Francisco Villa, with a force variously estimated at from 500 to 1,000 men, crossed the border, in small detachments, about 3 miles west of the border line gate, and concentrated for an attack on the town of Columbus, N. Mex. The attack was made during hours of extreme darkness, it being the intention of Villa, according to information obtained by the military authorities, to loot the town after disposing of the garrison. In the fight which ensued, 7 American soldiers were killed and 2 officers and 5 soldiers were wounded; 8 civilians were killed, and 2 were wounded. Mexican bandits killed in the town, the camp, and on the border line, numbered 67, while the wounded and captured numbered 7. Immediately after the raid, one troop of Cavalry mounted and pursued the Mexicans. The troop at the border line gate also mounted and struck the retreating Mexicans in the flank; the two troops then joining, continued the pursuit of the Mexicans south of the border for 12 miles, discontinuing the pursuit only when the ammunition was exhausted, and the horses and men, without water and almost exhausted, could continue no longer. The bandits, in the meantime, retreated in a southeasterly direction. The number of Mexicans killed in this running fight is estimated to be between 70 and 100; but no accurate estimate of the number

wounded can be made. Much property and many animals were abandoned by the Mexicans in their flight.

On March 10, 1916, the commanding general, Southern Department, was directed to organize an adequate military force, under the command of Brig. Gen. John J. Pershing, with instructions to the latter to proceed promptly across the border in pursuit of the Mexican band of outlaws that had attacked Columbus. Under these instructions, two columns were organized, one being from Columbus and the other from Culberson's ranch. The advance of the Columbus column, consisting of 7 troops of the Thirteenth Cavalry, the Sixth and Sixteenth Infantry, Battery C, Sixth Field Artillery, and Ambulance Company No. 7, started, on March 15, on the road through Palomas, Ascension, and Corralitos, toward Casas Grandes. The Culberson column, consisting of the Seventh Cavalry, 10 troops of the Tenth Cavalry, and Battery B, Sixth Field Artillery, left the same night by the Ojitas route, arriving at Colonia Dublan, 4 miles north of Nueva Casas Grandes. on the night of March 17.

THE PARRAL INCIDENT.

During the pursuit of Villa and his followers, Maj. Frank Tompkins, Thirteenth Cavalry, and Troops K and M of that regiment, under command of Col. W. C. Brown, Tenth Cavalry, camped outside of the town of Parral, Mexico, and sent a detachment of soldiers to the town for the purpose of purchasing supplies, at about 11 o'clock a. m., April 12, 1916. Maj. Tompkins was cordially received by the higher civil and military officials. The Mexican general, Lozano, accompanied Maj. Tompkins on the way to camp. On the outskirts of the town groups of native soldiers and civilians jeered, threw stones, and fired on the column. Maj. Tompkins took a defensive position north of the railroad, but was soon flanked by Mexican troops and forced to retire. The American troops continued to withdraw, to avoid further complications, until they reached Santa Cruz, 8 miles from Parral. Gen. Lozano attempted to control his men when the fighting first began, but failed. The known casualties were: Two American soldiers killed, 2 officers and 4 soldiers wounded, 1 soldier missing; 40 Mexican soldiers killed. The number of Mexican soldiers wounded is not known, although it is known that 1 Mexican civilian was wounded.

THE CARRIZAL INCIDENT.

Troops C and K, Tenth Cavalry, under the command of Capt. Charles T. Boyd, Tenth Cavalry, while on their way to Villa Ahumada on a scouting expedition, reached the town of Carrizal, Mexico, on the morning of June 21, 1916, and permission was sought from the commanding officer of the Mexican forces garrisoning the latter place to pass through the town in order to reach Villa Ahumada. Gen. Gomez, the Mexican commander, sent an officer of his command to the American troops, denying the latter the permission requested. During the conference Mexican troops began to move toward the flanks of the American troops. The latter assumed a defensive position, and in the engagement which ensued Capt. Charles T. Boyd and Lieut. Henry R. Adair, Tenth Cavalry, and 7 enlisted men were killed, and Capt. Lewis S. Morey, Tenth Cavalry,

and 9 enlisted men were wounded. Twenty-three enlisted men of the Tenth Cavalry and 1 civilian interpreter were captured and sent to Chihuahua City, but they were subsequently returned to the United States. The estimated number of Mexicans killed, which included Gen. Gomez, is 39; the number of wounded is not known.

BANDIT RAIDS ACROSS THE MEXICAN BORDER.

In addition to the raid at Columbus, N. Mex., before referred to, several raids of more or less importance occurred during the period covered by this report, notably the raids at—

Glenn Spings, Tex., on May 5, 1916, the casualties being 3 American soldiers and 1 civilian killed; 3 American soldiers wounded. It is estimated that 2 Mexican bandits were killed, but the number of wounded is not known.

San Ygnacio, Tex., on June 15, 1916, the casualties being 4 American soldiers killed and 5 wounded; 6 Mexican bandits killed.

Near Fort Hancock, Tex., July 31, 1916, casualties being 1 American soldier and 1 civilian (United States customs inspector) killed and 1 American soldier wounded; 3 Mexicans killed and 3 captured by Mexican de facto Government troops.

CALL OF THE ORGANIZED MILITIA AND NATIONAL GUARD INTO THE SERVICE OF THE UNITED STATES.

Having in view the possibility of further aggression upon the territory of the United States and the necessity for the proper protection of the Mexican frontier, the President thought proper to exercise the authority vested in him by the Constitution and laws to call out the Organized Militia; consequently, on May 9, 1916, he issued a call through the governors of the States of Arizona, New Mexico, and Texas, and directed the concentration of the militia of those States at places to be designated by the commanding general of the Southern Department.

On the same date San Antonio, Columbus, and Douglas were designated as the places of concentration for the militia of Texas, New Mexico, and Arizona, respectively, and upon the arrival of the militia at the designated places of rendezvous the necessary procedure for their muster into the service of the United States under the provisions of the act of Congress approved January 21, 1903, as amended by the act of Congress, approved May 27, 1908, was at once entered upon and vigorously prosecuted, the greater part of the militia so called having been duly mustered into service before the close of the fiscal year.

It was also directed by the department that the Federal authorities assume the duty of recruiting for the militia in the United States service and that this office take the necessary action. In accordance with these directions the commanding general of the Southern Department was ordered, on May 27, 1916, to detail such officers and enlisted men from Texas militia mustered into the United States service as might be necessary to recruit the militia of Texas to full strength, and similar orders with respect to recruiting the militia of the other States concerned were issued at a later date. On June 3, 1916, the recommendation of the commanding general of the Southern Department that Fort Sam Houston be designated as a recruit rendezvous for that purpose was approved.

In accordance with these directions and orders the recruitment of the militia called into service as above set forth has proceeded as rapidly as conditions permitted and is still being prosecuted at the close of the period covered by this report.

The same reasons that caused the President to issue the call for militia on May 9, 1916, impelled him on June 18, 1916, to call into the service of the United States a large part of the Organized Militia and the National Guard of the other States of the Union and the District of Columbia, the call being duly issued on the date last mentioned through the governors of all the States concerned and the commanding general of the District of Columbia militia, a mobilization point for the militia of each State and the District of Columbia being designated in the call.

In the meantime the national defense act had been approved June 3, 1916, providing among other things for the transition of the Organized Militia of the several States and the District of Columbia to the National Guard by taking the oath prescribed in that act, and this transition was in progress in the several States when the call of June 18 was made. Upon the arrival of the militia at the mobilization points or places of rendezvous designated the necessary procedure for their induction into the military service of the United States was entered upon at once, those who had qualified as members of the National Guard being accepted into the service of the United States under the provisions of the act of Congress approved June 3, 1916, and the others being mustered into the service of the United States under the provisions of the act of Congress approved January 21, 1903, as amended by the act of Congress approved May 27, 1908.

It is obvious that there is a large amount of work to be performed and many matters of detail involved in the concentration of the militia at the various mobilization points, in examining them individually and inducting them into the military service of the United States. While necessarily this work was not completed at the close of the fiscal year, satisfactory progress therein had been made, many of the organizations had been inducted into the Federal service, and the work connected therewith remaining undone was well in hand and was being expedited by all concerned.

Urged by the importance of having an adequate force on the border at the earliest practicable date, instructions were given on June 23, 1916, to the commanding generals of the Eastern, Central, and Western Departments that the moment any complete unit of militia had arrived at a State mobilization camp and the mustering officer had reported that the unit was reasonably equipped for field service, the particular organization concerned be sent at once to the point on the border designated by the commanding general of the Southern Department.

On July 31, 1916, the date of the latest complete returns received, the troops in the Southern Department consisted of 2,352 officers and 43,338 enlisted men of the Regular Army, and 5,058 officers and 102,077 enlisted men of the National Guard, making a total of 7,410 officers and 145,415 enlisted men. On the date given there were 1,910 officers and 38,229 enlisted men in mobilization camps, and 128 officers and 3,410 enlisted men of the National Guard serving in the Western Department not included in the foregoing figures, making the total strength of the National Guard in the Federal service on the date mentioned 7,096 officers and 143,716 enlisted men.

The practice, inaugurated in February, 1912, of separating as far as possible prisoners convicted of purely military offenses from those convicted of statutory or common-law crimes, with a view to afford the former every opportunity practicable to be restored to an honorable status, was continued throughout the year. In furtherance of

this policy an additional disciplinary company was organized at the Pacific Branch of the Disciplinary Barracks in January, 1916. Up to the close of the fiscal year 8 disciplinary companies and 2 disciplinary bands had been organized; 4 companies (formed into a battalion) and 1 band at the United States Disciplinary Barracks, 3 companies and 1 band at the Pacific Branch, and 1 company at the Atlantic Branch. Since the close of the fiscal year a fourth company has been organized at the Pacific Branch and the 4 companies at that branch have been formed into a battalion. The organization of a disciplinary band at the Atlantic Branch also was authorized in General Order No. 29, War Department, dated July 21, 1916. Men whose conduct is such as to entitle them to the privilege are assigned to these companies, in which they receive a special course in military training and instruction during one-half of each working day. The time thus devoted to military training would otherwise be expended by these men at hard labor. After he has been deemed to have made sufficient progress in his duties as a member of the disciplinary organization the prisoner is permitted to file his application for honorable restoration to duty. A recommendation is finally made to the Secretary of War in these cases only after information has been obtained by the commandant from all available sources relative to the character and habits of the prisoner before his enlistment, during his enlistment, and while in confinement. If the prisoner's conduct and habits seem to have been such as to warrant favorable action, his honorable restoration to duty is recommended. As stated in a subsequent paragraph, 193 of the members of these disciplinary organizations were honorably restored to duty in the Army during the fiscal year. After having been restored to duty the soldier is detailed for duty at the barracks for at least three months, upon the completion of which period of duty he is regularly assigned to an organization.

The Army appropriation act approved March 4, 1915, authorized the Secretary of War to establish a system of parole for prisoners confined in the United States Disciplinary Barracks and its branches, the terms and conditions of parole to be such as the Secretary of War might prescribe. As stated in the last annual report, parole regulations were approved by the Secretary of War and put into effect May 18, 1915, and one prisoner was released on parole prior to the close of the fiscal year 1915. This man was discharged from custody during the fiscal year 1916, while still on parole.

During the fiscal year ended June 30, 1916, 228 applications for release on parole were received in this office. Of these, 159 were approved, 57 were disapproved, 1 was not acted upon owing to the fact that a recommendation that the unexecuted portion of the applicant's sentence of confinement be remitted had been approved prior to the receipt of his application for release on parole, and 11 had not received final consideration at the close of the fiscal year.

During the year 156 general prisoners were actually released on parole from the United States Disciplinary Barracks and its branches. Of these, 2 violated the terms of their parole and were returned to the barracks to serve out the balance of their sentence in confinement, 7 others who likewise violated the terms of their parole were in escape at the close of the year, 81 were discharged from custody while on parole on account of their terms of confinement having expired, and 66 were still on parole on June 30, 1916.

GENERAL PRISONERS.

At the beginning of the fiscal year 1916 there were 2,459 general prisoners in custody. Of this number, 546 were in confinement at military posts; 155 at the United States Penitentiary, Leavenworth, Kans.; 982 at the United States Disciplinary Barracks, Fort Leavenworth, Kans.; 432 at the Pacific Branch, United States Disciplinary Barracks, Alcatraz, Cal.; 257 at the Atlantic Branch, United States Disciplinary Barracks, Fort Jay, N. Y.; 34 at the Government Hospital for the Insane (now St. Elizabeths Hospital), Washington, D. C.; and 53 were in transit from one place of confinement to another.

During the fiscal year 3,011 were committed to confinement; 34 escaped prisoners were recaptured; 2,669 were released at expiration of sentence; 58 escaped; 7 died; 213 were honorably restored to duty; and the unexecuted part of sentence was remitted in 262 cases; leaving 2,295 general prisoners in custody at the close of the year. Of this number, 205 were at military posts; 225 at the United States Penitentiary, Leavenworth, Kans.; 1,083 at the United States Disciplinary Barracks, Fort Leavenworth, Kans.; 430 at the Pacific Branch, United States Disciplinary Barracks, Alcatraz, Cal.; 311 at the Atlantic Branch, United States Disciplinary Barracks, Fort Jay, N. Y.; 33 at the Government Hospital for the Insane (now St. Elizabeths Hospital), Washington, D. C.; and 8 were in transit from one place of confinement to another. Of the 2,295 general prisoners reported above as in confinement at the close of the fiscal year, 21 were on parole from the United States Penitentiary, and 26 from the United States Disciplinary Barracks and its branches.

As in previous years, applications for clemency in the case of prisoners undergoing confinement in execution of sentences of general courts-martial added materially to the correspondence of the office. At the beginning of the fiscal year 87 applications for clemency previously made had not received final consideration, they having been referred to the commanding generals of military departments or elsewhere in the course of investigation as to the merits of the cases. During the year 2,263 applications for clemency were received, but 173 of these were cases in which other applications were pending at the date of their receipt. Clemency was denied in 1,515 cases, the unexecuted parts of sentences were wholly remitted in 201 cases, parts of the unexecuted sentences were remitted in 242 cases, and in 108 cases reports were made to the Department of Justice for consideration in connection with applications for parole under the act of Congress approved June 25, 1910 (36 Stat. L., 819). One prisoner was released prior to action on the application for clemency in his case. At the close of the fiscal year 110 cases had not received final consideration, having been referred to the commanding generals or others, in the course of investigation as to the merits of the cases, and not having been returned to this office before the close of the year.

The number of cases received does not represent the number of individual prisoners by whom, or in whose behalf, applications for clemency were made. In many cases as soon as one application is denied another is presented, as many as five consecutive applications having been received during the year in the case of one general prisoner. 2,066 cases acted upon during the year were applications of 1,836 general prisoners, as against 1,928 applications

in the cases of 1,754 general prisoners acted upon during the preceding year.

It has been the policy to give special recognition on the Fourth of July and Thanksgiving Day of each year to a limited number of general prisoners confined at the United States Disciplinary Barracks and its branches who have served not less than 18 months of their terms of confinement and who have the best records of conduct, and in accordance with that policy the unexecuted portions of the confinement of 8 general prisoners were remitted during the fiscal year ended June 30, 1916.

The commandant of each of the barracks was authorized in December, 1915, to submit each year recommendations for the pardon at Christmas time of not more than 3 general prisoners, without regard to the restrictions as to length of sentences imposed by the regulations with respect to the pardons authorized for July 4 and Thanksgiving Day. Accordingly, the sentences of 6 general prisoners were remitted for Christmas, 1915.

In addition to the cases considered upon applications, the unexecuted parts of sentences were remitted by the War Department for administrative reasons in the cases of 8 general prisoners without applications for clemency having been made in their behalf.

Under the authority conferred upon the Secretary of War by section 1352 of the Revised Statutes of the United States, which authority was reaffirmed in the act of March 4, 1915 (38 Stat. L., 1074), honorably to restore to duty general prisoners confined at the United States Disciplinary Barracks and its branches, 193 general prisoners (143 of them former deserters) were honorably restored to duty, and under the authority contained in the act of March 4, 1915 (38 Stat. L., 1074), honorably to restore to duty general prisoners confined at places other than the Disciplinary Barracks and its branches, 20 general prisoners (12 of them former deserters) were honorably restored to duty from confinement at military posts, a total of 213 general prisoners (155 of them former deserters) honorably restored to duty during the fiscal year 1916. Of this total, 126 were restored after sentence of dishonorable discharge had been executed, and 87 were restored without having been dishonorably discharged, the execution of the sentence of dishonorable discharge in their cases having been suspended.

Of the 193 general prisoners restored after confinement at the Disciplinary Barracks or its branches, 2 (both former deserters) have been dishonorably discharged, 2 (1 of them a former deserter) have been discharged under paragraph 148½, Army Regulations, 7 (6 of them former deserters) have been honorably discharged, 15 (13 of them former deserters) were absent in desertion at the close of the fiscal year 1916, 1 was present awaiting trial for desertion, and 166 (121 of them former deserters) were serving with their organizations at that time—5 with the rank of sergeant.

Of the 20 general prisoners restored to duty after confinement at a military post other than the Disciplinary Barracks or its branches, 1 has been dishonorably discharged, 1 has been discharged under paragraph 148½, Army Regulations, 2 (both former deserters) have been honorably discharged, and 16 (10 of them former deserters) were serving with their organizations at the close of the fiscal year—1 with the rank of corporal.

Of the 194 general prisoners (171 of them former deserters), referred to in the last annual report as having been restored to duty during the fiscal years 1914 and 1915, 19 (17 of them former deserters) have been dishonorably discharged, 8 (7 of them former deserters) have been discharged without honor, 6 (all former deserters) have been discharged under paragraph 148½, Army Regulations; 1 (a former deserter) has been discharged under paragraph 126, Army Regulations, as amended; 1 (a former deserter) has died, 60 (54 of them former deserters) have been honorably discharged—9 with rank of corporal and 5 with the rank of sergeant, 29 (28 of them former deserters) were absent in desertion at the close of the fiscal year 1916, 2 (both former deserters) were present awaiting trial for desertion, and 68 (55 of them former deserters) were on duty with their organizations at that time—7 with the rank of corporal, 2 with the rank of sergeant, and 1 with the rank of battalion sergeant major.

The total number of restorations to duty prior to the close of the fiscal year 1916 is 407.

In tabulated form the results appear as follows:

	1914	1915	1916	Totals.
Restored to duty.....	(38) 39	(133) 155	(155) 213	(326) 407
Honorably discharged.....	(21) 22	(33) 38	(8) 9	(62) 69
Died.....		(1) 1		(1) 1
Dishonorably discharged.....	(5) 5	(12) 14	(2) 3	(19) 22
Discharged without honor.....	(3) 3	(4) 5		(7) 8
Discharged under par. 148½, Army Regulations.....	(2) 2	(4) 4	(1) 3	(7) 9
Discharged under par. 126, Army Regulations, as amended.....		(1) 1		(1) 1
Absent in desertion, June 30, 1916.....	(4) 4	(24) 25	(13) 15	(41) 44
Present, awaiting trial for desertion, June 30, 1916.....		(2) 2	1	(2) 3
Present for duty, June 30, 1916.....	(3) 3	(52) 65	(131) 182	(186) 250
Totals.....	(38) 39	(133) 155	(155) 213	(326) 407

NOTE.—Figures in parentheses indicate number of men who were convicted of desertion prior to restoration to duty.

CURRENT WORK OF THE ADJUTANT GENERAL'S OFFICE.

There was an increase in the volume of current work of the office during the latter part of the fiscal year, as compared with the prior year. This increase was caused by the increase of the Army under the provisions of the act of Congress approved June 3, 1916, by the offers of service and the correspondence in connection with the troubles on the Mexican border, and by the calling of the National Guard into the service of the United States because of those troubles. Notwithstanding the vigorous efforts of the officers and clerks, their unceasing interest in the work, and an extension by the Secretary of War of the office hours in divisions in which the work was falling in arrears, it was found to be impossible to dispose of all cases received during the year and, at the close of office on June 30, 1916, there remained 2,775 cases undisposed of. During the fiscal year 471,655 cases were disposed of—an average of 1,546 for each working day of the year. During the preceding fiscal year this average was 1,100, and during the fiscal year 1914 it was 971 cases.

The table following shows either the source of receipt or the character of the cases received in The Adjutant General's Office during fiscal year ended June 30, 1916.

From the Army at large	108, 038
From the General Staff and chiefs of bureaus in the War Department.....	15, 433
Recruiting for the Army.....	10, 389
Whereabouts of individual officers or enlisted men or organizations of the Army.....	13, 883
Appointments in the Army or as cadets at the Military Academy.....	6, 457
Requests for blank applications or other forms or for printed orders.....	13, 811
Clemency for general prisoners.....	5, 556
Applications for certificates in lieu of lost discharges.....	4, 569
Applications for removal of charges of desertion (act of Mar. 2, 1889).....	494
Applications for certificates for purchase of campaign and certificate of merit badges.....	3, 520
From the Commissioner of Pensions.....	36, 647
From the Auditor for the War Department.....	13, 663
From the Commissioner of the General Land Office.....	801
From Union associations and volunteer soldiers' homes.....	2, 024
From Confederate associations and homes and State pension officials.....	24, 252
Notifications to the Auditor for the War Department of desertions and dishonorable discharges from the Army.....	3, 700
All other cases, miscellaneous.....	211, 193
Total.....	474, 430
Total number of cases disposed of during the year.....	471, 655
On hand June 30, 1916.....	2, 775

The foregoing table does not include approximately 384,000 returns, muster rolls, enlistment papers, identification records, periodical reports, and other similar records and reports received and filed in the office during the year, nor does it include approximately 67,500 copies of department and other general, special, and general courts-martial orders also received in the office during the year. This represents a total for the fiscal year of 451,500 of these papers—an average of 1,480 for each working day in the year.

Mention was made in the preceding annual report of The Adjutant General with regard to the very large number of requests that are made in person or by telephone for information from the records and which are answered orally without any record being made either of the request or of the answer. The number of such personal and telephone calls increased so much during the latter part of the last fiscal year, principally in connection with inquiries as to the whereabouts or status of officers and enlisted men of the National Guard called into the service of the United States, that it became necessary to install an additional telephone in the office of the chief clerk for the purpose of handling them. No count of such requests has been kept but it is certain that they amounted to thousands in the course of the fiscal year covered by this report.

Extra efforts were made to keep the current work of the office as nearly up to date as possible, but, notwithstanding those efforts, only 85.4 per cent of all cases received were disposed of within 24 hours from the time they reached the office. However, the cases that required more than 24 hours for investigation and adjudication or for answer were either routine matters of little urgency or complicated cases or those which required the compilation of extended lists or lengthy answers to dispose of them.

It is proper to remark, in connection with this part of the report, that much that can not be shown in any statement of the number of cases received and disposed of has been added to the work of the office. This added work consists of the keeping of rosters and ref-

erence lists in order to meet legislative requirements concerning the detached service of commissioned officers and the duration of foreign service of both officers and enlisted men; the keeping of records of enlisted men while on furlough in the Army Reserve; the printing and distribution of all publications issued by the War Department (work that heretofore has been done by the War College Division); keeping the records of the Officers' Reserve Corps; the obtaining, compiling, and keeping continually up to date all obtainable information as to the names, ages, addresses, occupations, and qualifications for appointment as commissioned officers of the Army, in time of war or other emergency, of men of suitable ages who, by reason of having received military training in civil educational institutions or elsewhere, may be regarded as qualified and available for appointment as such commissioned officers; and the making of other rosters and lists in order to comply with all of the requirements of the so-called "national defense act," approved June 3, 1916.

The distribution to the Army, as prescribed in paragraph 803, Army Regulations, of general and special orders, bulletins, and changes was continued throughout the year. The following table shows the number of copies of orders, bulletins, and changes distributed during the fiscal year ended June 30, 1916:

General orders.....	714,360
Bulletins.....	462,500
Special orders, full copies.....	95,000
Special orders, extracts.....	91,200
Special orders, bulletined.....	85,120
Recruiting, enlistment, and miscellaneous circulars.....	61,120
Changes, Army Regulations, manuals, etc.....	661,650

During the fiscal year 7,526,662 blank forms and 206,592 books, manuals, etc., were distributed to the Army by this office, either directly or to the proper officers of the military division and departments for distribution by them, or were sold to the Organized Militia of the several States and the District of Columbia.

The distribution of War Department public documents was transferred from the War College Division, General Staff, to this office under the provisions of Paragraph I, General Orders, No. 21, War Department, June 16, 1916.

In addition to the foregoing, approximately 9,765,000 circulars, containing descriptions of deserters from the Army, were distributed during the year. The data for those circulars were prepared in this office and the circulars were distributed to police officials, United States marshals and their deputies, county officers, established detective agencies, and others. In connection with the descriptive circulars, approximately 46,000 lists containing the names of deserters, with circular numbers, who had been returned to military control, were mailed to the recipients of the circulars.

IDENTIFICATION SYSTEM.

The use of finger prints, photographs, and personal descriptions as a means of personal identification of enlisted men of the Regular Army was continued throughout the year. At the close of the year 354,296 finger-print records had been received in this office, 107,931 of those records having been made in cases of reenlistment, in which records made during the previous service of soldiers were on file.

As has been indicated in previous annual reports of this office, it is desirable to obtain finger-print records of men claiming prior service, unless it is known positively at the post at which the man seeks reenlistment that he is the former soldier. This is necessary in detecting cases, several of which have been discovered, in which a man with a discharge certificate in his possession claimed the service represented by and enlisted under the name appearing in that certificate, although when his finger-print record was received in this office it was established beyond doubt that he was not the man he claimed to be, but was an impostor. On June 30, 1915, this office had on file the finger-print records of 246,365 individuals who were then or had been previously enlisted in the Regular Army.

During the fiscal year 414 cases of fraudulent enlistments of former deserters, general prisoners, and others were discovered through the finger-print system. Of these 414 cases, 17 had withdrawn from military control when the identity was established. Of the remaining 397 cases, 58 were held in service, 229 were dishonorably discharged and confined for various periods by sentences of courts-martial, 67 were discharged under paragraph 148½, Army Regulations, 5 were dropped from the rolls of the Army and delivered to the naval authorities, either as deserters from the Navy or Marine Corps, and in 38 cases no report of final disposition has been received.

By means of this system this office has identified also dead men who were former soldiers and whose identity could not be satisfactorily established in any other way, as well as civil offenders who sought to evade arrest for their crimes by enlisting in the Army under assumed names, and soldiers who left impressions of their fingers while in the act of committing some serious offense. As stated in previous reports the use of finger-print records undoubtedly has deterred many criminals from enlisting in the Army for the purpose of escaping detection and arrest. If the civil authorities have reason to suspect that an offender wanted by them has enlisted in the Army and will send his finger prints to this office, it can be determined promptly whether or not such person has enlisted, thereby enabling the civil authorities to apprehend persons wanted by them and materially aiding the War Department in carrying out its policy of preventing undesirable persons from serving in the Army.

The following cases are cited as examples of the utility of the finger prints in identifying dead men or malefactors whose identity could not be established otherwise:

A man was killed by a train in Iowa; his finger prints were taken and they finally reached this office. The man was found to be a former soldier. A somewhat similar case was that of a man killed by an elevated train in New York City. His features were so mutilated that they were beyond recognition. His finger prints were taken, and after they reached this office it was discovered that he was a former soldier. The body of a man killed during the storm at Galveston was supposed to be that of a soldier. The remains were so badly mutilated, however, that recognition was impossible, but after his finger prints were taken and forwarded to this office his identity was established beyond all doubt.

A soldier who broke into and robbed a tailor shop left finger prints on a pane of glass he broke. The glass was sent to this office, and

by comparing the impression on the glass with records in this office his identity was established.

In addition to the finger-print records of the enlisted men of the Regular Army received during the year, finger-print records of members of the National Guard organizations have been received and filed in The Adjutant General's Office. Records from but few of those organizations had been received before the close of the fiscal year, but it is expected that complete data on this subject can be furnished in the next annual report.

INDEX-RECORD CARD WORK.

The index-record card work performed during the fiscal year consisted in the reproduction of 511,807 Confederate individual-service record cards of the Civil War. This work is being prosecuted as rapidly as the current work of the office will permit.

The whole number of index-record cards prepared up to and including June 30, 1916, comprised 51,721,759 military cards and 8,655,868 medical cards, a total of 60,377,627 cards. The foregoing figures do not include the medical cards (approximately 2,312,000) pertaining to the Regular Army. These cards are not made in this office, but are received in the Surgeon General's office from the field and transmitted to this office after they become noncurrent.

The total number of index-record cards prepared up to June 30, 1916, includes 8,204,360 Confederate military cards and 740,781 Confederate medical cards. These cards were prepared in the process of compilation, pursuant to law, of the roster of officers and enlisted men of the Union and Confederate Armies, and represent entries on the records and not the number of different individuals.

OFFICIAL RECORDS OF THE UNION AND CONFEDERATE ARMIES.

Eight sets of the Official Records of the Union and Confederate Armies, consisting of 1,024 books and 1,424 atlas plates, were distributed during the fiscal year to Senators, Representatives, and Delegates of the Fifty-seventh Congress, and to permanent libraries and educational institutions designated by those Senators, Representatives, and Delegates under the provisions of the act of Congress approved March 3, 1903. (32 Stat. L., 1145.)

Thirty-nine volumes of that publication were sold by The Adjutant General's Office during the fiscal year, the prices of the volumes aggregating \$27.10.

ROSTER OF OFFICERS AND ENLISTED MEN OF THE UNION AND CONFEDERATE ARMIES.

The compilation of the Confederate part of the "Complete Roster of Officers and Enlisted Men of the Union and Confederate Armies," authorized and required to be compiled by a provision contained in the act of Congress approved February 25, 1903 (32 Stat. L., 884), was continued during the year as rapidly as the condition of the current business would permit. The legislation under which the compilation is being made does not require or authorize the publication of the proposed roster, but Congress no doubt intended that the

authority for its publication should be given when the work of compilation shall have been completed or shall have been sufficiently advanced to justify the beginning of the publication.

The compilation of the Union part of the roster is comparatively complete, and, as stated in previous annual reports, if the publication is authorized by Congress, the preparation of printer's copy for the part relating to Union volunteer troops can be begun.

The compilation of the Confederate part will not be completed for any one State until the carding of all the Confederate hospital records shall have been completed.

COLLECTION OF REVOLUTIONARY WAR RECORDS.

The provision of the act of Congress approved March 2, 1913 (37 Stat. L., 723), which authorized and directed the Secretary of War to collect or copy and classify, with a view to publication, the scattered military records of the Revolutionary War, has been complied with as far as practicable with the money appropriated for that purpose. The entire sum of \$25,000 appropriated by that act for collecting or copying the records has been expended and that part of the work was completely suspended early in June, 1915.

The total number of records copied is 30,522, of which 19,796 are from Massachusetts, 6,122 from Virginia, 4,073 from North Carolina, 527 from Connecticut, 2 from Kentucky, and 2 from the District of Columbia.

The collection of Revolutionary War military records in the possession of the War Department, including the records copied as indicated above, is so far from complete that it is now impracticable to arrange them for publication.

MEDALS OF HONOR.

During the fiscal year ended June 30, 1916, there were 9 medals of honor issued by the War Department. All of them were issued to replace medals of the old design. The whole number of awards of the congressional medal of honor up to and including June 30, 1916, was 2,622, the same number as shown in the last report. Medals of honor are issued by the War Department under the provision of the act of Congress approved April 23, 1904 (33 Stat. L., 274).

The act of June 3, 1916, provided for the appointment of a board of five general officers on the retired list of the Army for the purpose of investigating and reporting upon past awards of the so-called congressional medal of honor by or through the War Department, with a view to ascertain what, if any, medals of honor have been awarded or issued for any cause other than distinguished conduct by an officer or enlisted man in action involving actual conflict with the enemy. The act provides further that in any case in which the board shall find and report that said medal was issued for any cause other than distinguished conduct by an officer or enlisted man involving actual conflict with the enemy, the name of the recipient of said medal shall be stricken permanently from the official medal of honor list, and it shall be a misdemeanor for any person whose name has been stricken from said list to wear or publicly display said medal, and if such per-

son is in the Army, he shall be required to return the medal to the War Department for cancellation. Pursuant to the provisions of the act cited Special Orders, No. 136, War Department, June 10, 1916, was issued convening a board of officers composed of Lieut. Gen. Nelson A. Miles, Lieut. Gen. Samuel B. M. Young, Maj. Gen. Joseph P. Sanger, Brig. Gen. Butler D. Price, and Brig. Gen. James N. Allison.

MEDAL OF HONOR ROLL.

The act of Congress approved April 27, 1916, established the "Army and Navy medal of honor roll," and provides for the issue of suitable certificates to persons who have received the medal for distinguished and hazardous deeds beyond the call of duty, performed in action, and grants a special pension of \$10 a month for life to all such persons. Between the date of the passage of the act and the close of the fiscal year certificates had been issued by the War Department to 121 former officers and enlisted men of the Army.

CAMPAIGN, CERTIFICATE OF MERIT, AND SERVICE BADGES.

A summary of the campaigns for which the issue of campaign badges has been authorized is published in General Orders, No. 129, War Department, August 13, 1908. The issue of those badges, which are intended "to commemorate services which have been or shall hereafter be rendered in campaign," was authorized by General Orders, No. 4, War Department, January 11, 1905.

During the past fiscal year 181 names were added to the lists of officers and enlisted men who were found to be entitled to campaign badges, making a total of 42,881 badges issued to officers and enlisted men found to be entitled to those badges. Of these 31,685 were Philippine campaign badges, 7,259 Spanish campaign badges, 1,629 China campaign badges, 1,859 Indian campaign badges, and 449 Civil War campaign badges.

Campaign badges are a part of the uniform; they are sold to officers and issued to enlisted men in service by the Quartermaster Corps, on data furnished by The Adjutant General's Office.

It was decided by the Secretary of War in 1908 that campaign badges may be issued to members of the Organized Militia who are entitled to wear the uniform of the Army and whose service conforms to the requirements of General Orders, No. 129, before cited. Since the date of that decision, May 26, 1908, data have been furnished to the Quartermaster General of the Army in the cases of approximately 2,015 members of the Organized Militia who made applications for campaign badges.

In addition to the campaign badges before referred to, the issue of a service badge was authorized for service in the Army of Cuban Pacification by General Orders, No. 96, War Department, May 11, 1909. Data have been furnished to the Quartermaster General of the Army in the cases of 6,248 applications for those badges since the date of the order authorizing their issue.

By authority of the President, the issue of an "Army of Cuban Occupation Badge" was provided for in General Orders, No. 40, War Department, June 28, 1915. The badge is for issue to officers and

enlisted men who rendered service with the Army of Cuban Occupation between July 18, 1898, and May 20, 1902. The order concerning these badges was not distributed generally until July, 1915. Data have been furnished to the Quartermaster General in the cases of 3,134 applications for these badges during this fiscal year.

The issue of a certificate of merit badge and ribbon as a part of the uniform to each officer and enlisted man in the service having a certificate of merit was authorized in General Orders, No. 4, War Department, January 11, 1915, as amended in General Orders, No. 129, War Department, August 13, 1908. At the close of this fiscal year 237 certificates of merit badges had been issued.

In order that former officers and soldiers now in civil life might be able to obtain the campaign badges and certificate of merit badges to which they would have been entitled if they were still in service, an arrangement was made with the United States Mint at Philadelphia by which these badges would be furnished by the mint at a nominal cost, covering expense of manufacture, upon receipt of certificates from The Adjutant General of the Army in verification of the claims.

This arrangement was completed in December, 1913, and since that date 19,417 applications for campaign badges and the Army of Cuban Pacification badge have been received in this office. In 16,551 of these cases the service was verified and certificates were issued accordingly, and in 2,866 cases the applications were denied. The campaigns and service for which these certificates were issued are as follows: Civil War, 5,498; Spanish War, 4,056; Philippine insurrection, 4,838; Indian wars, 778; China campaign, 321; Army of Cuban Pacification, 190; Army of Cuban Occupation, 870. In addition to these, certificates for purchase of certificate of merit badges were issued in 17 cases.

PHILIPPINE SERVICE MEDAL, CONGRESSIONAL,

The "Philippine service medal," authorized by the act of Congress approved June 29, 1906 (34 Stat. L., 621), is issued "to each of the several officers and enlisted men and families of such as may be dead, who, having volunteered and served under the call of the President for the War with Spain, at or beyond the term of their enlistment to help to suppress the Philippine insurrection, and who subsequently received an honorable discharge from the Army of the United States, or who were prior to such discharge."

The medals are awarded by the Overseas Nurses Corps on data furnished by The American Nurses Association.

[illegible]

CIVILIAN EMPLOYEES OF THE ADJUTANT GENERAL'S OFFICE.

The number of employees authorized by law for The Adjutant General's Office during the fiscal year ended June 30, 1916, was the same as the number authorized during the preceding year, although after the close of the last fiscal year Congress provided for an increase in the force proportionate to the increase in the Regular Army for the fiscal year 1917, authorized by the act of June 3, 1916. This addition to the force is required to handle the large amount of additional work that will fall upon this office as the result of the reorganization and increase of the permanent military establishment provided by the act of June 3, 1916, and the new duties devolving upon the office as the result of certain provisions of that act, and was not required to meet the temporary increase in the work caused by the conditions along the Mexican border and the induction of the Organized Militia into the service of the United States. The officers of The Adjutant General's Department on duty in the War Department and the civilian employees of the office would have been able to handle this last-mentioned additional work through an extension of office hours, but they could not be expected to handle the enormous increase in the amount of work occasioned by the increase in the Regular Army and the conditions along the Mexican border. Since last March part of the force has been working beyond the regular office hours—often far into the night—to the limit of their endurance. It mattered not whether the hours had been long and the work exacting, they all—officers, clerks, and messengers—responded promptly and without complaint when called upon to work longer hours in order to handle the current work. I fully appreciate the fact that it was their unselfish loyalty and devotion to duty that prevented the work of the office from falling hopelessly in arrears, and I desire to take this opportunity to extend my thanks to each officer, clerk, and subclerical employee for the assistance each has rendered.

Not including 1 clerk who entered the military service of the United States as a captain of a National Guard organization, and 5 clerks of short service who were transferred to other branches of the Government service, 32 vacancies occurred in the clerical force of this office during the fiscal year covered by this report, 20 by resignation and 12 by death. The average age of those who died was a little over 70 and the average length of their service was over 34 years. The average length of service of those who resigned was a little more than 8 years. Classified by salaries, those vacancies were as follows: 1 at \$2,000, 1 at \$1,800, 2 at \$1,600, 2 at \$1,400, 14 at \$1,200, and 12 at \$1,000—an annual average salary of \$1,206.

H. P. McCain,
The Adjutant General.

The SECRETARY OF WAR.

REPORT OF THE INSPECTOR GENERAL.

REPORT OF THE INSPECTOR GENERAL.

WAR DEPARTMENT,
OFFICE OF THE INSPECTOR GENERAL,
Washington, September 26, 1916.

SIR: The following is a report relative to the work of the Inspector General's Department during the fiscal year ended June 30, 1916.

PERSONNEL OF THE DEPARTMENT.

The officers of the permanent corps remain as stated in my last annual report, namely, one brigadier general and one colonel. Three colonels, four lieutenant colonels, and nine majors served as inspectors general during the fiscal year under the act of February 2, 1901; and four acting inspectors general, consisting of one colonel, one lieutenant colonel, and two majors were doing duty in the department under the act of June 23, 1874.

Without exception, these officers performed their varied and numerous duties in an intelligent, fearless, and zealous manner.

Under the national defense act, approved June 3, 1916, the Inspector General's Department is to consist of 1 Inspector General with the rank of brigadier general, 4 inspectors general with the rank of colonel, 8 inspectors general with the rank of lieutenant colonel, and 16 inspectors general with the rank of major—an increase of 1 colonel, 4 lieutenant colonels, and 7 majors. Under the same act this increase is to be made in five annual increments, and the first increment, which has now become available, is to consist of 1 lieutenant colonel and 1 major.

This increase, it is believed, will be sufficient for the additional work of inspection resulting from the increase of the Regular Army. Whether it will suffice for the inspection of the National Guard, imposed upon this department by the above act, can not at this time be stated.

In this connection, I wish to point out the importance of placing all the inspections of the Regular Army, other than those made by commanding officers, including inspections of civil institutions of learning, where officers of the Army are detailed as military instructors, under the control of the Inspector General's Department, and providing a personnel sufficient in strength to perform these duties.

INSPECTIONS.

During the past fiscal year the inspection of the Military Establishment, though not entirely completed, was approximately so. In some of the geographical departments the remaining inspections had

been arranged for and in some cases were under way when emergency orders were received for the immediate inspection of the mobilization camps of the National Guard, which had been called into the service of the United States. This was the latter part of June, at the very close of the fiscal year.

The prescribed inspections embraced every phase of military affairs, and included military posts, stations, and commands; camps of maneuver and instruction; the staff offices at department headquarters; the Military Academy and the service schools; the armories, arsenals, general hospitals, and the depots of the supply departments; the recruit depots and main recruiting stations; the Disciplinary Barracks and its branches; the numerous required inspections of Army transports upon arrival at or departure from ports; the cable boats, mine planters, and the harbor boats of the Quartermaster Corps; and the biennial inspection of such national cemeteries and ungarrisoned posts as became due during the year. Also included in the work of the fiscal year were the inspections of the Soldiers' Home, District of Columbia, and of the headquarters and 10 branches of the National Home for Disabled Volunteer Soldiers located in various parts of the country. The usual inspections of the money accountability of all disbursing officers of the Army and the very numerous inspections of unserviceable property presented for condemnation, were also made during the year.

The irregularities and deficiencies noted in these inspections were reported in due and prescribed form, and the necessary steps were promptly taken to secure proper and speedy remedial action.

In addition to the large number of regularly prescribed inspections enumerated above, the officers of the Inspector General's Department made during the year, under orders from the War Department or of department commanders, many special investigations, involving much time and labor, and they assisted in the annual tactical inspections of troops devolving upon department and brigade commanders under paragraphs 193 and 194, Army Regulations.

NEW DUTIES ASSIGNED TO THE DEPARTMENT.

The national defense act, approved June 3, 1916, adds some new duties to be performed by the Inspector General's Department, to wit:

SEC. 67. * * * The governor of each State and Territory and the commanding general of the National Guard of the District of Columbia, shall appoint, designate, or detail, subject to the approval of the Secretary of War, an officer of the National Guard of the State, Territory, or District of Columbia who shall be regarded as property and disbursing officer for the United States. * * * *Provided further*, That the Secretary of War shall cause an inspection of the accounts and records of the property and disbursing officer to be made by an inspector general of the Army at least once each year: * * *

SEC. 93. The Secretary of War shall cause an inspection to be made at least once each year by inspectors general, and if necessary by other officers, of the Regular Army, detailed by him for that purpose, to determine whether the amount and condition of the property in the hands of the National Guard is satisfactory; whether the National Guard is organized as hereinbefore prescribed; whether the officers and enlisted men possess the physical and other qualifications prescribed; whether the organization and the officers and enlisted men thereof are sufficiently armed, uniformed, equipped, and being

trained and instructed for active duty in the field or coast defense, and whether the records are being kept in accordance with the requirements of this act. The reports of such inspections shall serve as the basis for deciding as to the issue to and retention by the National Guard of the military property provided for by this act, and for determining what organizations and individuals shall be considered as constituting parts of the National Guard within the meaning of this act.

The act says that these inspections of the National Guard shall be made by inspectors general, and if necessary by other officers, of the Regular Army detailed for that purpose. The presumption is that the detail of other officers will not be necessary except when an inspector general is not available to make the inspection.

When the National Guard was called into the service of the United States on June 18, 1916, inspections were at once begun by officers of the Inspector General's Department. These inspections had for their objects the following: The determining of the suitability of the camps, sanitary condition, care of sick, water supply, drainage, the efficiency of service of supply; and also inspections were made of the organizations of the National Guard on the following points, to wit:

- (a) Law complied with as to organization.
- (b) Food and preparation of same.
- (c) Physical condition of men and officers.
- (d) Typhoid immunization and smallpox vaccination.
- (e) Equipment: Organization, individual, and camp.
- (f) Fitness and sufficiency of uniform.
- (g) Clothing (shoes, special).
- (h) Wheeled transportation, including ambulances.
- (i) Pack transportation.
- (j) Officers' mounts.
- (k) Field return of command.

Some of these inspections were made in the last fiscal year, but most of them were not made until after its close.

The considerable increase in the numerical strength of the Regular Army provided for by the national defense act of June 3, 1916, does not impose any new duties upon the Inspector General's Department, but it does add very materially to the work it has to do. As shown above, however, new duties, as well as much additional work, are added in connection with the inspection of the National Guard and of the accounts, etc., of the National Guard property and disbursing officers.

INSPECTOR GENERAL'S OFFICERS' RESERVE CORPS.

The War Department has authorized the appointment of 16 majors in the Inspector General's Reserve Corps, authorized by the act of June 3, 1916. All applicants for examination for appointment to these positions must have had at least one year's active service as an officer with some branch of the Army, the Volunteers, or the National Guard in the service of the United States. Applicants must be under 45 years of age, and must show themselves qualified for the position. Complete details as to the examinations required are given in General Orders, No. 32. War Department, 1916, which may be obtained from The Adjutant General of the Army.

CLERKS FOR THE INSPECTOR GENERAL'S OFFICE.

In order to keep up with the current work the present force of clerks in the Inspector General's Office has for some time past been compelled to work overtime every day and is still doing so. A great amount of additional work will soon be imposed upon these clerks by the new duties assigned to this department by the national defense act of June 3, 1916; indeed, the additional work has already begun to come in, and it will continue to come in in increasing volume. An estimate for the minimum number of clerks that will be required to do the work has been submitted, and it is hoped that it will receive favorable consideration.

DISCIPLINE.

Discipline, generally, throughout the Army, so far as reported, has been good.

INSTRUCTION.

The troops appear to be generally well instructed. No serious criticisms have been made.

It has been reported that the work of the mobile troops in field training has been satisfactory; that the officers and men, generally, in camps of instruction, were eager to learn.

In bayonet combat and fencing it was reported that the mobile troops show marked improvement, notwithstanding the fact that the fencing outfits are still criticized as unsatisfactory. It is stated that many organizations have abandoned the outfits supplied them and have improvised substitutes.

As a general thing, earnest effort has been made by troops to acquire efficiency in signaling with the flag and general service code, and to attain the standard prescribed by paragraph 1562, Army Regulations, but it has been reported that the effort has not been generally successful. The success in mastering the semaphore, it is stated, has been much more encouraging.

It appears that, as a rule, the work of garrison schools for officers at the various posts has been satisfactory, but in post schools for enlisted men, in many instances, the results have not been satisfactory.

In the Philippine Department the consensus of opinion among Infantry officers is that the present allowance of ammunition is not sufficient to permit the thorough training of companies in combat practice. The opinion seems to be that an increase of about 100 rounds per man in the annual allowance would be of great benefit in the more thorough training of organizations.

SERVICE SCHOOLS.

Since the Spanish-American War both the development and the benefit to the Army of the service schools have been striking. These schools could, however, be better coordinated, and it is believed in such coordination is to be found a great possibility for the further increase of their usefulness.

trained and instructed for active duty in the field or coast defense, and whether the records are being kept in accordance with the requirements of this act. The reports of such inspections shall serve as the basis for deciding as to the issue to and retention by the National Guard of the military property provided for by this act, and for determining what organizations and individuals shall be considered as constituting parts of the National Guard within the meaning of this act.

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COOPERATION OF ARMS OF THE SERVICE.

The war abroad has accentuated the importance of close cooperation between the different arms, especially between Infantry and Field Artillery. Although the necessity of officers familiarizing themselves with the duties of arms other than their own has been realized in our service, it is believed that the steps thus far taken have been along theoretical rather than practical lines.

It is believed that at stations in which organizations of two or more arms are serving officers should be required to familiarize themselves with the powers and limitations of arms other than their own through actually accompanying units of such arms during small maneuvers, target practice, etc. Selected officers of Cavalry and Infantry should also be detailed for a period of a month or six weeks at the School of Fire for Field Artillery.

COLONIAL REGIMENTS.

The department inspector of the Philippine Department reports that the officers of that department are about unanimous in the belief that the system of colonial regiments now in vogue is not desirable, the general opinion among them being that it is very injurious to the discipline, the training, and the general efficiency of organizations on foreign service. It is said that this system of a constantly changing personnel compels a feeling of uncertainty and lack of settled policy that is very harmful and is destructive of organization esprit.

RECRUITS.

No complaint has been received of the quality of the recruits received during the year.

The following extract from the report of the last annual inspection of Fort Oglethorpe, Ga., relative to the training of recruits, is interesting and instructive:

Under a system inaugurated in this regiment [Eleventh Cavalry] about two years ago, all the recruits for the regiment are turned over to one troop for training before being permanently assigned to troops. The present recruit troop is Troop H, under the command of * * *, Eleventh Cavalry.

At the time of my visit a class of recruits had just completed three months' training and was ready to be turned over to the other troops for permanent assignment. A careful inspection of the work of these recruits, mounted and dismounted, demonstrated beyond question that this method of training recruits is the proper one. Their knowledge of the duties of a soldier is, I believe, above that of the average enlisted man of a year's training assigned to a troop in the ordinary way. Their proficiency in riding and handling their arms mounted was especially noticeable.

QUARTERMASTER CORPS.

There have been no complaints as to the adequacy of the ration allowance and but few as to the quality of the ration or other commissary supplies.

The system of fuel supply has been reported as cumbersome and as involving much office work. Inspection reports show numerous

complaints of the inadequacy of the fuel allowances properly to heat public buildings. This is especially the case on the western coast, and it has been urged that fuel allowances for the Western Department be further considered with a view to its special needs, since climatic conditions there differ so radically from other sections of the country in the same latitude.

UNIFORMS.

While changes in uniform are, in general, undesirable, and are so regarded in the service, it is believed that certain changes in the service coat are both desirable and necessary.

The service uniform should be designed for service in the field rather than in garrison. The discontinuance of the sweater makes it necessary to take the service coat into the field. For service in the field a coat must be loose at the neck and in general must be so cut, including a slit in the back of the skirt, as to permit freedom and ease of movement. That the present service coat, with its close-fitting collar and rigid cut, is unsuitable for hard work or even moderate exercise must be admitted.

From an examination of the present field uniform of other countries it is apparent that a suitable coat for field work can be given a military appearance quite as formal and as pleasing as that of our present service coat.

It is recommended that a suitable service coat be designed and adopted.

The opinion throughout the line of the Army seems to be in favor of a shirt that opens all the way down the front. It is believed that this change in the shirt will add to the comfort of the men, in warm weather especially.

ORDNANCE DEPARTMENT.

The war abroad has developed or emphasized the importance of new articles of arms and equipments, besides improvements in the old. The larger types of field guns and howitzers; trench mortars of the larger types, as artillery, and of the smaller types, as infantry weapons; new types and methods of employment of machine guns, hand grenades, steel caps, etc., and the use of and protection against gas, are all matters which claim our serious attention. The development and manufacture of new matériel of these kinds which are being undertaken by the Ordnance Department should be accompanied by practical tests and instruction, which can only be obtained by putting the new matériel in service as rapidly as it can be developed and supplied.

REPAIR SHOPS—QUARTERMASTER AND ORDNANCE.

Large quantities of quartermaster and ordnance property are undoubtedly lost to the Government through the lack of proper and timely repairs. This loss is due, it is believed, to a variety of such causes as lack of facilities in organizations for making proper repairs; lack of skill by organization mechanics; and, to some extent at least, lack of care and attention on the part of organization com-

manders. Losses due to lack of proper and timely repairs are especially apparent in all articles of canvas, webbing, and leather. In addition, in the Field Artillery the lack of timely repairs, made by expert mechanics, to the matériel results in greatly increased ultimate expenditures.

If suitable quartermaster and ordnance repair shops were established at all points at which a regiment or more is stationed it is believed that a substantial saving could be effected. Such shops should be equipped with all necessary machinery and should be provided with expert mechanics as foremen, the greater part of the actual labor of repair being done by the organization mechanics.

TRANSPORTATION FOR SANITARY TROOPS.

There is, no doubt, a universal recognition in the Army of the advisability, if not the absolute necessity, of providing motor transportation for sanitary troops. Probably the necessities attendant upon the present mobilization of a large number of troops upon the Mexican border will result in causing motor transportation for the sanitary troops to be supplied.

FIELD TRAINS.

It is believed that the field trains have been too greatly reduced. In fixing the allowances of wagons, etc., for field trains the primary object is, of course, mobility, but it is to be remembered that mobility may be as readily reduced by too great a reduction in the number of wagons allowed as by too great an increase in field trains. An unwarranted reduction in wagons tends to overloading in spite of honest efforts to enforce the regulations.

When our Army is compared to those of other nations the paucity of trained soldiers affords a striking illustration of the necessity of preserving the health and, in so far as possible, the comfort of our men when in the field. To this end it is believed that the surplus kits should be carried in the field trains, as was formerly the regulation. In so far as concerns the Infantry, it is essential that at least a spare pair of shoes be carried in the field trains.

On account of the general lack of ability in cooking among our people, it is particularly necessary to avoid individual cooking in our service. It is believed that in the early stages of the present war in Europe, rolling kitchens were frequently kept with their organizations until the arrival of the units upon the actual battlefield.

It is understood that several types of rolling kitchens are now under test in the Southern Department, and that the issue of kitchens to all organizations of the mobile forces only awaits the determination of the most suitable type. It is recommended that this be expedited and that coincident with the supply of the kitchens, regulations be issued providing that such kitchens shall habitually accompany their units on the march.

PUBLIC ANIMALS.

The requirements of active service on the border have resulted in having quite a number of public animals inspected and condemned.

The data called for on descriptive cards of public animals are said often to be incomplete, owing largely to failure on the part of purchasing officers to cause proper entries to be made on the cards.

REMOUNTS.

The following extract from the report of the last annual inspection of Fort Oglethorpe, Ga., relates to the training of remounts, and is reproduced as being, as is believed, worthy of consideration:

All remounts for the regiment [Eleventh Cavalry] are now turned over to one troop (Troop G) to be trained for six months before being assigned to troops. The remounts now at the post have been under training for three months. The remounts, with one or two exceptions, appear to be of a good type. They are somewhat light in weight, but this defect may disappear after a year's training.

The system of turning the remounts over to one troop for training is, I believe, the proper one to secure the best results.

First Lieut. * * *, Eleventh Cavalry, is at present in command of the remount troop and is accomplishing excellent work. His own opinion of these remounts is as follows:

"The horses are very quiet and gentle; they show a very good degree of suppleness and activity, and they jump, freely and willingly, small hurdles and ditches of any character. I believe that by the end of another three months, when they are turned in to the other troops, they will be as well trained as is necessary for troop horses, and very much better than the average troop mount."

After witnessing the work of these remounts, I confirm the above estimate.

FARRIERS' AND HORSESHOERS' SCHOOL.

The following extract relative to the establishment of a post farriers' and horseshoers' school, which it is reported has been of great value, is also from the report of inspection of Fort Oglethorpe, Ga., viz:

Without interfering with the other instruction of the regiment [Eleventh Cavalry] a farriers' and horseshoers' school has been established under the direction of * * *, Eleventh Cavalry, assisted by the two veterinarians of the regiment. The class consists of 24 farriers and 24 horseshoers, the regular horseshoer and farrier from each troop, with an apprentice from each troop.

After a thorough investigation of this class, including the inspection of the work and examination of the men as to their theoretical and practical knowledge, I am of the opinion that this school is of great value to the regiment. It systematizes horseshoeing and treatment of diseases, and stimulates the interest of officers and men in these two important subjects.

PUBLIC FUNDS.

As a general rule the inspections of the accounts of disbursing officers of the Army have shown that the public funds have been honestly and efficiently administered.

POST EXCHANGES.

It has been reported that frequent irregularities of a more or less serious nature have been discovered in the inspection of post exchanges, and these were almost in every instance made possible by failure on the part of exchange officers, auditors, and exchange coun-

cils to properly perform their duties. The financial losses, in every case where they could be definitely determined, were recommended to be charged against the officers whose negligence was proven; in other cases where negligence was found it was recommended that it be noted on the efficiency records of the delinquent officers.

PAPER WORK.

Generally speaking, business is so conducted as to reduce paper work to a minimum and simplify administration so far as is practicable under the Government system of transacting business. Notwithstanding this fact, paper work in the Army still appears to be excessive, as always heretofore.

PRISONERS.

The system of parole of general prisoners and of probation of garrison prisoners appears to have been generally carried out, and apparently with good results.

ARMY TRANSPORTS.

Reports show that the trans-Pacific transport service has been efficiently conducted; no complaints of any consequence have been received relative to any of the departments of this service, but on the contrary commanding officers of troops have generally commended the efficiency and courtesy of the ships' officers, the cleanliness of the ships, and the excellence of the accommodations and food. The life-saving apparatus is reported as ample and of the latest pattern.

DISCIPLINARY BARRACKS.

At the inspections of the Disciplinary Barracks and its branches the disciplinary companies were found to be well instructed and well trained, and affairs were in excellent condition.

RECRUIT DEPOTS.

At the various recruit depots it was found that the instruction of recruits was carried out in conformity with War Department regulations prescribed therefor, and the results obtained were good. The depots appeared to be carefully and efficiently administered.

Very respectfully,

E. A. GARLINGTON,
Inspector General.

The SECRETARY OF WAR.

REPORT OF THE JUDGE ADVOCATE GENERAL.

REPORT OF THE JUDGE ADVOCATE GENERAL.

SEPTEMBER 14, 1916.

SIR: I submit the following report of the Judge Advocate General's Department for the year ending June 30, 1916.

REORGANIZATION OF THE JUDGE ADVOCATE GENERAL'S DEPARTMENT.

The recently enacted national defense act (sec. 8) reorganized the department by adding thereto 2 judge advocates with the rank of colonel, 4 judge advocates with the rank of lieutenant colonel, and 13 judge advocates with the rank of major, these increases to be made in five annual increments, as nearly as practicable one-fifth of the total increase in each grade to be added each year. The vacancies created or caused by the act distribute themselves under this rule as follows:

	1916	1917	1918	1919	1920
Original vacancies:					
Colonels.....		1		1	
Lieutenant colonels.....	1	1		1	1
Majors.....	3	2	3	2	3
Appointment of majors to fill increments.....	4	4	3	4	4

The additional lieutenant colonelcy corresponding to this year's increment was filled by the promotion of Maj. Walter A. Bethel, the senior officer of his grade. The four vacancies in the grade of major corresponding to this year's increment have not yet been filled.

Additions to the clerical force of the Judge Advocate General's Office of one clerk class 3, and two clerks class 1, with an additional messenger, are authorized by the act of September 9, 1916.

REVISED ARTICLES OF WAR.

A project of revision of the Articles of War which has been pending before the War Department since December of 1903, and before Congress since April of 1912, was, with amendments of the original project, enacted into law as a rider to the Army appropriation act for the fiscal year ending June 30, 1917, approved August 29, 1916.

The first project of the revision of the Articles of War was prepared during the latter half of the calendar year of 1903. This project was submitted to department commanders and to a large number of specially selected officers for criticism and was exhaustively considered by a board of officers convened by the then commandant of the

Army Service Schools, Maj. Gen. J. Franklin Bell, but was not transmitted to the Congress by the War Department. It was not until April, 1912, that the revision, perfected in the light of the criticism it had received, was submitted by the then Secretary of War, Mr. Stimson, to Congress as a basis of remedial legislation very much needed. The revision was introduced in the House on April 22, 1912, by the chairman of the House Military Committee, and in the Senate on April 25 by the chairman of the Senate Military Committee, and was by both Houses of Congress referred to their respective Committees on Military Affairs. Hearings were conducted by the House Military Committee covering the period from May 14 to May 27, 1912, but that committee, though receiving the revision favorably and suggesting a few amendments therein of a nature to improve the revision, did not report the revision as a whole. The Senate committee reported out 9 articles of the revision relating to the composition, constitution, and jurisdiction of courts-martial, and these articles were enacted as a part of the Army appropriation act approved March 2, 1913.

The Sixty-third Congress convened on April 7, 1913. The revision of the Articles of War, carrying the amendments suggested during the House Military Committee's hearings and certain others suggested by further study was introduced by the chairman of the Senate Military Committee on April 15, 1913, and referred to the Committee on Military Affairs. Hearings were subsequently held by a subcommittee of the Senate Military Committee, which reported the revision back to the full committee during the second session of the Sixty-third Congress, which reported the revision to the Senate on February 6, 1914, with certain amendments. The revision passed the Senate with further amendments on February 9, 1914, and upon reaching the House was referred to the Committee on Military Affairs, which took no action. On February 22, 1915, the Senate Military Committee included the revision in the then pending Army appropriation bill, and as a part of that bill the revision again passed the Senate February 23, 1915, and went to conference. The conferees, after reporting back to their respective houses two disagreements respecting the revision, finally rejected it and the bill passed without this particular rider.

Shortly after the convening of the Sixty-fourth Congress, first session, the revision was again introduced in the Senate January 6, 1916, and hearings were conducted before a subcommittee of the Senate Military Committee. On February 9, 1916, the revision, with amendments, was favorably reported by the full committee to the Senate, and on March 9, 1916, the revision was again passed by the Senate. On reaching the House it went to the House Military Committee March 11, 1916, but it was not until June 29, 1916, that a subcommittee of the House convened to consider the revision. It does not appear that the subcommittee made any report upon the revision. Meantime the Senate Committee on Military Affairs, in reporting to the Senate the Army appropriation bill on July 3, 1916, included the Articles of War in the form they had passed the Senate on March 9, and with the articles included, the appropriation bill was passed on July 25. The House disagreed to the Senate amendments and the bill went to conference. On August 7 the conference report, embodying the Articles of War amended so as to

exempt retired officers and soldiers from amenability thereto, and in certain other regards, was accepted by both Houses, and the bill went to the President for his approval. On August 18 the President vetoed the bill, basing his objections thereto on the amendment introduced by the conferees respecting retired officers. The appropriation bill was immediately reintroduced in the House without the Articles of War, and in that form was passed by the House on August 22. Upon reaching the Senate Military Committee that committee restored the Articles of War, with the changes necessary to meet the objections of the President and with certain other minor amendments, and in this form the bill was passed by the Senate. In the House a motion to concur in all the Senate amendments prevailed. The bill was approved by the President August 29, 1916.

With the exception of articles 4, 13, 14, 15, 29, 47, 49, and 92, which take effect immediately, the revision will go into effect on March 1, 1917. Meantime the Manual for Courts Martial will have to be revised and circulated throughout the Army. It is proposed to enter upon this work at once, and an attempt will be made to have the revised manual distributed throughout the Army by February 1, 1917, in order that there may be a month available for its study before the new code, as a code, takes effect.

GENERAL REVISION OF THE MILITARY LAWS.

A much larger task than the revision of the Articles of War is the revision and codification of all our military laws which this office has been directed to prepare in pursuance of authority granted in the Army appropriation act approved August 29, 1916. In 1911 this office submitted a report to the Secretary of War recommending that such a general revision be attempted, the revision to conform in scope and character to the revision and codification of the laws of the United States of a permanent and general nature directed by the act of March 3, 1901. Military legislation since 1878, enacted mainly in the form of riders to appropriation acts, is piecemeal legislation. Related legislation is widely separated and there is real difficulty within the military establishment in ascertaining the condition of the statute law on any subject. Experiencing the same difficulty in drafting the large amount of legislation enacted this year, the military committees readily accepted the suggestion for a comprehensive revision and codification and have provided an initial appropriation of \$5,000 for paying the expense of clerical hire, printing, and other expenses incident to the making of the revision. The work has been already entered upon and substantial progress has been made with the chapter relating to organization of the Regular Army. The problem in that chapter is to restate the provisions of the new National Defense Act of June 3, 1916, on the subject of Regular Army organization, incorporating the unrepealed provisions of prior law and particularly of the act of February 2, 1901, and to make of it a consistent whole. It is hoped to have this much of the revision ready to submit with the preliminary report of progress which must be rendered to Congress on the first day of the ensuing session of that body. It is confidently expected that the general revision will be completed well within the two-year period allowed by law. The scope and character of the revision authorized by Congress will per-

mit of the omission of redundant and obsolete matter, the making of such alterations as are necessary to reconcile contradictions, supply the omissions, and amend the imperfections of the original text; and permits also the embodiment in the revision of changes in the substance of existing law. It is hoped to take advantage of this authority to rewrite the statutes in the light of the administrative and judicial construction they have received, in the expectation that we may thereby reduce the number of references to the War Department and to this office for legal construction.

OTHER REVISION WORK.

The revision of the book on Military Reservations, etc., Title, Jurisdiction, etc., has been completed and the book published and distributed to the Army. The revision of Federal Aid in Domestic Disturbances was interrupted by the relief of Lieut. E. V. Cutrer from duty as instructor in law at West Point and his assignment to station in the Philippines, thus postponing indefinitely the completion of this work. On account of the large increase in the volume of work of this office, the revision of Winthrop's Military Law and Precedents has been suspended for many months, but with the increased personnel authorized by the national defense act it is hoped this work may be resumed and completed at an early date.

During the fiscal year ending June 30, 1916, this office has continued the preparation of the monthly bulletin giving a digest of the opinions of this office, decisions of the Comptroller of the Treasury and of the State and Federal courts, as well as of the opinions of the Attorney General on questions relating to the military service.

TRIALS IN CIVIL COURTS.

During the year a number of important insular cases, involving considerable labor, were prepared and presented by this office in the Supreme Court of the United States and in the Court of Appeals for the First Circuit, to which circuit the district of Porto Rico belongs. In addition, this office has represented the interests of the department in various Federal courts and in several State courts in a number of habeas corpus and injunction proceedings arising out of the call of the Organized Militia and National Guard into the military service of the United States, and involving novel, difficult, and important questions growing out of the reorganization of the National Guard prescribed by the national defense act.

TRIALS BY GENERAL COURTS-MARTIAL.

There were 4,743 trials by general courts-martial during the year 1916, of which trials 337 resulted in acquittal, as against 5,339 for 1915 and 4,572 for 1914, showing a reduction of 11.1 per cent as against 1915 and an increase of 3.6 per cent over 1914.

DELAY IN GENERAL COURT-MARTIAL TRIALS.

While the judge advocates at the department headquarters have continued their efforts to reduce the delay between the arrest of the soldier under charges and the final action by the reviewing authority

in his case, the unsettled conditions affecting the Army, requiring a large portion of the troops to be stationed on the Mexican border, away from their permanent stations, have caused the average number of days of delay for the year 1916 to increase to 36, as compared to 33 in 1915 and 34 in 1914. There has been a notable decrease in the delay this year of 12 days at West Point, while in the Eastern, Central, and Philippine Departments the average number of days remained the same as last year. The average delay in the Western Department was increased by 6 days, in the Southern Department by 3 days, and in the Hawaiian Department by 4 days over last year. These delays have been caused principally by the difficulty in securing witnesses and depositions from great distances, due to the frequent change of stationed troops during the year—sometimes persons belonging to organizations in the field in Mexico—and other causes which active duty in the field has served to counteract the efforts to reduce the average number of days; also, another primary counteracting cause to expeditious trials of cases has been the breaking up of courts by sending officers and organizations to the Southern Department, thereby increasing the period during 1916 over that for the two preceding years.

The following table shows the average delays in the several departments for the past five years:

	1912	1913	1914	1915	1916
	<i>Days.</i>	<i>Days.</i>	<i>Days.</i>	<i>Days.</i>	<i>Days.</i>
Eastern Department ¹	48	47	42	37	37
Central Department ¹	48	48	45	40	40
Western Department ¹	44	40	41	40	46
Southern Department.....		44	39	39	42
Hawaiian Department.....		36	32	22	26
Philippine Department ¹	25	38	30	37	37
Canal Zone.....					32
West Point.....			26	38	26
China expedition.....					
Average.....	41	40	34	33	36

¹ These were "Divisions" in 1912, and the figures given under that year so relate to them.

From July 1, 1915, to June 30, 1916, this office received, recorded, and filed 5,017 general courts-martial records; prepared 1,749 clemency reports, 255 reports on restoration to duty, 130 on citizenship, 128 on parole, and 4 on reenlistment, making a total of 7,283 cases handled. During this period the office loaned 451 general courts-martial records to the United States Disciplinary Barracks at Fort Leavenworth, Kans., 455 to the Pacific Branch, United States Disciplinary Barracks, Alcatraz, Cal., and 105 to the Atlantic Branch, Fort Jay, N. Y., making a total of 1,001.

TRIALS BY SPECIAL COURTS-MARTIAL.

During the year there were 2,153 trials by special courts-martial, of which trials 159 resulted in acquittal, as against 2,533 in 1915 and 1,953 in 1914, showing a reduction of 15 per cent as against 1915 and an increase of 9.2 per cent over 1914. There were also 88 general prisoners tried by special courts during the year, of which 3 were acquitted.

TRIALS BY SUMMARY COURTS-MARTIAL.

The total number of trials of enlisted men by summary courts-martial during the year 1916 was 37,877, of which trials 965 resulted in acquittals, as compared to 40,905 in 1915 and 36,856 in 1914, showing a decrease of 0.074 per cent as against 1915, and a decrease of 0.026 per cent as against 1914.

DESERTION.

The statistics show that there were 1,950 enlisted men tried by general courts-martial for desertion in 1916, as against 2,535 in 1915 and 2,097 in 1914, showing a decrease of 23 per cent as against 1915 and 7 per cent as against 1914. There were also 432 enlisted men tried by special courts-martial in 1916, as compared to 201 in 1915, indicating an increase of 114 per cent.

The desertions reported during the fiscal year 1916 amount to 2,382, or 2.40 per cent of the whole number of enlistment contracts in force during the year, as compared to 4,435 reported desertions and a percentage of 3.23 per cent for last year.

It should be noted that these figures include the cases in which the charge of desertion was removed as having been erroneously made, in which the accused was acquitted, in which he was convicted of the lesser included offense of absence without leave and retained or dishonorably discharged from the service.

The reports of the judge advocates show that during this year there were 5 acquittals, 105 cases in which charges were removed as having been erroneously made, 364 cases in which the soldier was convicted of the lesser included offense of absence without leave and retained in the service, and 114 cases in which the soldier was convicted of the lesser included offense of absence without leave and dishonorably discharged, making a total of 588 cases, which, subtracted from the number of desertions reported, leaves 1,794, or 1.81 per cent, of the total number of enlistment contracts in force during the year.

The following table exhibits the true as compared with the reported percentages for the past eight years.

Year.	Desertions reported.	Charges unsustained.	True number of desertions.	Reported percentages.	True percentages.
1909.....	4,993	311	4,682	4.97	4.66
1910.....	3,464	606	2,768	3.66	2.92
1911.....	2,504	380	2,124	2.28	1.93
1912.....	3,411	560	2,851	3.00	2.50
1913.....	4,451	871	3,580	4.15	3.34
1914.....	3,882	810	3,072	3.10	2.45
1915.....	4,435	795	3,640	3.23	2.65
1916.....	2,382	588	1,794	2.40	1.81

REVISED PUNISHMENT ORDER.

The executive order published in War Department General Orders' No. 70, September 23, 1914, making important changes in the regulations governing punishment to be imposed by military tribunals has been in operation now about 22 months, and the reports received indicate that the failures to comply with its requirements have been decreasing until now they are quite unusual.

As to the figures which follow it may be said that in all but a small percentage of the cases in which detention of pay alone, forfeiture alone, or hard labor without confinement was imposed, or sentence of confinement was suspended, the soldier under former conditions would have been awarded a sentence including confinement.

Sentence of confinement imposed in cases not involving dishonorable discharge.....	3, 143
Sentences of confinement suspended.....	79
Sentences of detention of pay alone.....	1, 416
Sentences of forfeiture alone.....	14, 437
Sentences of hard labor without confinement.....	674
Sentences of hard labor and forfeiture without confinement.....	846
Total without confinement.....	17, 452

CIVIL WORK OF THE OFFICE.

The civil work of the office is indicated by the following summary classes of opinions and reports rendered and legal instruments prepared.

Questions involving appropriations.....	51
Examination of bonds.....	559
To secure issues of Government property to rifle clubs under the act of April 27, 1914.....	352
To secure issues of Government property to schools under the act of April 27, 1914.....	66
To secure issues of Government property to universities and colleges having courses in military training.....	34
Of officers of the Quartermaster Corps.....	63
Of quartermaster agents.....	7
Of disbursing officers of the militia.....	28
To secure the performance of contracts.....	3
Indemnity bonds.....	5
Of treasurer of Soldiers' Home.....	1
Claims against the Government.....	50
Contracts.....	74
Clemency to general prisoners.....	1, 749
Detached service.....	21
Discharge.....	51
Eight-hour law.....	64
Enlistment.....	16
Gratuities to disabled or deceased officers and soldiers.....	39
Instruments relating to Government property.....	118
Leases.....	49
Revocable licenses.....	69
Proposed legislation.....	92
Loans and sales of Government property.....	46
The militia.....	54
Navigable waters.....	54
Parole of general prisoners.....	128
Pay and allowances.....	72
Private debts of persons in the military service.....	29
Permits for work in navigable waters.....	337
For wharves and similar structures, dredging, etc., under authority of section 10 of the act of March 3, 1899.....	116
For bridges across waterways the navigable portions of which lie wholly within a single State, under authority of section 9 of said act.....	170
For bridges across navigable waters of the United States, under the general bridge act of March 23, 1906, and special acts.....	30
Notices to alter bridges which have become unreasonable obstructions to navigation, under authority of section 18 of the act of March 3, 1899.....	11

Permits for work in navigable waters—Continued.

For deposits of material in navigable waters, under authority of section 13 of the act of March 3, 1899.....	3
For structures in navigable waters of Porto Rico, under authority of the act of June 11, 1906.....	7
Government reservations.....	186
Reenlistment of discharged general prisoners.....	4
Restoration of general prisoners.....	255
Retirement.....	31
Questions concerning taxation.....	11
Volunteers.....	3
Transportation.....	47
Restoration of citizenship.....	130
Transfer of general prisoners.....	139
Miscellaneous opinions and reports (estimated).....	1,100

Total of opinions, reports, and instruments..... 6,056

Total, 6,056, compared with 4,211 for last year, which shows an increase in volume of work of 43.81 per cent.

The following tables, marked "Appendix A," show detailed statistics as to the number of trials by general and special courts-martial, and the classification of offenses tried by all courts-martial, as well as the trials by summary courts.

There is also submitted herewith, marked "Appendix B," a summarization of reports of judge advocates on duty at department headquarters and other general court-martial jurisdictions during the year, in order that the remarks and recommendations of each officer may be scrutinized by the others and by the service generally, with a view to eliciting broader criticism as to the betterments of the legal work of the Army.

E. H. CROWDER,
Judge Advocate General.

The SECRETARY OF WAR.

APPENDIXES.

APPENDIX A.

Number of trials by general court-martial.

Commissioned officers.....	31
Convictions.....	24
Convictions disapproved.....	4
Acquittals approved.....	3
Acquittals disapproved.....	3
Awaiting action by the War Department (June 30, 1916).....	2
Cadets, convictions approved.....	4,660
Enlisted men.....	4,252
Convictions approved.....	81
Convictions disapproved.....	206
Acquittals approved.....	26
Acquittals disapproved.....	5
Proceedings declared inoperative.....	2
Desertion proceedings declared void.....	88
Plea in bar sustained.....	50
Members of China expedition (report does not show action of reviewing authority).....	45
General prisoners.....	2
Convictions approved.....	2
Acquittals approved.....	2
Convictions disapproved.....	1
Trials null and void.....	1
Total.....	4,743

The statistics as to trials by general court-martial in recent years are as follows:

	1909	1910	1911	1912	1913	1914	1915	1916
Commissioned officers tried.....	43	30	42	29	33	32	35	31
Commissioned officers dismissed.....	10	7	6	6	8	8	7	3
Cadets tried.....	2	4	5	10	7	1	3	2
Cadets dismissed.....	2	2	6	6	2	1	1	1
Enlisted men tried.....	5,449	5,127	3,756	4,345	5,121	4,466	5,235	4,660
General prisoners tried.....	56	45	48	53	48	71	66	50
Percentage of trials of enlisted men to average enlisted strength of the Army.....	7.4	6.98	5	5.2	5.8	4.7	4.3	4.7

Additional general court-martial statistics.

	1913	1914	1915	1916
Charges received recommending trial by general court-martial.....	5,546	5,199	6,191	5,037
Cases referred for trial by general court-martial.....	5,193	4,595	5,468	4,619
Cases returned for trial by inferior court-martial.....	215	460	493	217
Charges upon which no trial was ordered.....	138	116	232	103
Defective charges requiring amendment before reference.....	2,117	2,642	2,435	1,733
Cases in which proceedings were returned for revision.....	397	297	422	348
Enlisted men dishonorably discharged as result of trial.....	2,653	2,732	3,241	2,906
Where dishonorable discharge resulted only from 5 previous convictions.....	412	299	368	438

Additional general court-martial statistics—Continued.

	1910	1911	1912	1913	1914	1915	1916
Total trials by general court-martial.....	5,206	3,851	4,435	5,209	4,572	5,339	4,743
Convictions approved.....	4,820	.....	4,083	4,831	4,292	4,992	4,321
Trials of enlisted men by special courts-mar-tial.....	346	206	249	384	1,953	2,523	2,153
Acquitted.....	96	.....	52	54	175	202	159
Trial of enlisted men by summary court-mar-tial.....	42,275	33,082	37,305	39,795	36,856	40,905	37,877
Acquitted.....	1,216	.....	1,036	1,023	1,102	1,166	965

During the year 88 general prisoners were tried by special court-martial, of which 3 were acquitted, and 52 by summary court-martial, 7 of which were acquitted.

DESERTION.

Statistics for desertion for the five fiscal years preceding June 30, 1916, are set forth below:

	1911	1912	1913	1914	1915	1916
Tried for desertion by general court-martial.....	1,347	1,577	1,896	2,097	2,535	1,950
Convicted of desertion and dishonorably discharged...	932	944	1,107	1,280	1,637	1,359
Convicted of desertion and not dishonorably discharged.	14	98	163	149	120	64
Convicted of absence without leave only and dishonor-ably discharged.....	101	117	169	158	161	147
Convicted of absence without leave only and not dis-honorably discharged.....	293	414	457	492	531	364
Tried for desertion by special court.....	.....	.....	.....	.....	201	432
Tried for desertion by special court and convicted of absence without leave only.....	.....	.....	.....	.....	11	229

The above table does not specifically set out the number tried for desertion and acquitted, and it does not include cases of desertion where action other than trial by court-martial has been taken.

General Orders, No. 77, War Department, June 10, 1911, announced the policy of the War Department as to the proper punishment for the offense of desertion in the cases of inexperienced soldiers who desert in the earlier periods of their enlistment contracts, and as well for the surrendered deserter. Disciplinary punishment by confinement and forfeiture was therein suggested as an appropriate punishment for such of these men as show a disposition to atone for their offenses, and the cooperation of reviewing authorities was invited in carrying out the new policy.

The order was issued near the close of the fiscal year 1911, and so does not materially affect the statistics of that year. The execution which the order has received is very clearly revealed by comparing the number of soldiers convicted of desertion who were retained in the service for the two years preceding the issue of the order with the number so retained during the three years following the order. For the former years (1910 and 1911) these numbers were 38 and 14, respectively, the corresponding percentages to the total number of soldiers tried and convicted of desertion being 3 per cent and 2 per cent. For the latter years (1912, 1913, 1914, and 1915) the number of convicted deserters retained in the service rose to 98, 163, 149, and 310, respectively, the corresponding percentages being 10, 13, 11, and 18. While the percentage increase of men saved to the colors through the operation of this order has been most marked, the numbers actually restored continue small in comparison with the total number convicted of this offense and dishonorably discharged.

Classification of offenses tried by all courts-martial.

Article of War.	Description of offense.	Number of convictions.			
		Officers.	Enlisted men.	General prisoners.	Militia.
8	Making false return.....				
	Offenses relating to public property:				
16	Wasting ammunition.....		5		
17	Selling horse or arms.....		6		
17	Selling accouterments or clothing.....		183		
17	Losing or spoiling horse or arms through neglect.....		99		
17	Losing or spoiling accouterments or clothing through neglect.....		464		
62	Abusing public animals.....		279	2	
62	Destroying public property.....		62		
62	Pawning and disposing of clothing.....		47		
62	Attempting to sell clothing.....		6		
62	Losing arms, accouterments, stores or other property.....		188		
62	Disposing of equipment.....		5		
62	Disposing of other public property.....		9		
62	Other offenses relating to public property under sixty-second article of war.....		213		
60	Purchasing Government property.....				
	Offenses against constituted authority:				
20	Disrespect to commanding officer.....		69		1
21	Offering violence to superior officer.....		14		
21	Disobeying superior officer.....		141		
23	Mutiny.....		1		
23	Failure to endeavor to suppress mutiny.....		1		
24	Disobeying noncommissioned officer while quelling fray, etc.....		3		
62	Disobedience of standing orders or regulations.....	4	3,739		8
62	Disobedience of or failure to obey commissioned officer.....	2	849	5	7
62	Disobedience of or failure to obey noncommissioned officer.....		2,852	5	5
62	Disobedience of or failure to obey sentinel.....		151	8	
61	Impugning professional conduct of superior officer.....	1			
62	Disrespect or insulting language or insubordinate conduct or threats toward or striking or assaulting a commissioned officer.....	1	273	4	2
62	Disrespect or threats or insulting language or insubordinate conduct toward or assaults upon a noncommissioned officer.....		2,519	6	3
62	Disrespect or insulting language or insubordinate conduct or threats toward or assaults upon a sentinel.....		174		1
62	Resisting arrest by military authorities.....		199		
62	Breach of arrest.....		1,619		1
62	Breaking quarantine or restrictions or parole.....		25	1	
62	Escape or conspiring to escape from confinement or sentinel.....		150	34	
62	Other offenses against those in authority.....		326		
	Offenses against subordinates: Abuse by officer or noncommissioned officer of authority over subordinates.....	2	18		
	Conduct unbecoming an officer and a gentleman:				
61	Financial irregularities.....				
61	Other irregularities.....				
61	Violation of pledge.....	2			
62	Fraudulent enlistment.....		411	1	
62	Carrying concealed weapons.....		41		
	Offenses by guards:				
39	Leaving post.....		74		
39	Sleeping on post.....		117		7
40	Quitting guard.....		194		2
62	Sentinel allowing prisoner to escape.....		51		
62	Sentinel permitting prisoner to obtain intoxicating liquor.....		21		3
62	Sentinel sitting down on post.....		140		
62	Other offenses committed by sentinels or others on guard in connection with such duty.....		957		3
	Offenses of violence:				
62	Fighting.....		17		
62	Threats to kill or injure.....	1	51		
62	Assault with dangerous or deadly weapon.....		43		
62	Assault with intent to do bodily harm.....		301	2	
62	Assault with intent to kill.....		38	2	
62	Assault with intent to commit robbery.....		1		
62	Assault, or assault and battery, and other offenses of violence not against one in authority nor otherwise classified under this subhead.....		419	1	
62	Manslaughter.....		7		

Classification of offenses tried by all courts-martial—Continued.

Article of War.	Description of offense.	Number of convictions.			
		Officers.	Enlisted men.	General prisoners.	Militia.
	Offenses involving personal dishonesty:				
60	Embezzlement or misappropriation.....		22		
60	Forgery.....		5		
60	Larceny.....		191	4	
60	Making or presenting false claims.....		4		
60	Wrongful acquirement or disposition of Govern- ment property.....		68		
60	Any other violation of the sixtieth article of war..		8		
62	Failure to pay debts.....	3	348		
62	Failure to return borrowed property.....		29		
62	Selling, pawning, or otherwise disposing of bor- rowed property.....		39		
62	Perjury or subornation of perjury.....		7		
62	Falsifying accounts.....		12		
62	Forgery and uttering forged papers.....		99		
62	Fraudulent financial transactions.....		33		
62	Larceny.....		529		
62	Embezzlement.....		28		
62	Robbery.....		24		
62	Having possession of stolen property.....		2		
62	Burglary.....		23		
62	Attempting burglary.....		2		
62	Obtaining money or other property under false pretenses.....	1	41		
62	Other offenses under the sixty-second article of war involving personal dishonesty of the offender.	5	316		1
	Unauthorized absences:				
31	Lying out of quarters.....		9		3
32	Absence without leave.....		14,841		19
33	Failure to attend drill, roll call, etc.....		5,117		3
47	Desertion.....		1,593		
62	Absence without leave from duty.....	4	1,244		2
	Offenses closely connected with military duty:				
62	Losing or abandoning equipment.....		8		
36	Hiring men to perform duty.....		5		
62	Quitting ranks on march.....		8		
51	Advising another to desert.....		2		
62	Careless handling or discharge of firearms.....		321		2
62	False official statement or report.....		896	1	1
62	Impersonating superior officer or sentinel.....		15		
62	Conspiring to desert.....		2		
62	Refusing to submit to surgical operation or medi- cal treatment.....		57		1
62	Refusing to submit to medical treatment for syphilis.....		4		
62	Malingering.....	1	43		
34	More than 1 mile from camp without pass.....		1		
62	Sleeping while on duty.....		58		
62	Failure to perform company punishment.....		5		
62	Failure to report for prophylactic treatment.....		1,094		
62	Failure to salute.....		10		
62	Other neglects of duty not classified under this subhead.....	1	1,609		4
	Offenses connected with intoxicating liquor:				
38	Drunkenness on duty.....	2	1,624		1
62	Drunkenness at post or in quarters.....	4	3,424	2	6
62	Drunkenness and disorderly conduct at post (or in quarters).....	1	1,728		21
62	Drunkenness and disorderly conduct, causing offender's arrest and conviction by civil author- ities.....		311		2
62	Having possession of or selling or buying intoxi- cating liquor.....		247		
62	Introducing liquor into camp, quarters, etc.....		876		
62	Other offenses connected with intoxicating liquor and not otherwise classified under this subhead.....	28	1,787		
	Offenses against decency:				
62	Committing a nuisance.....		346		1
62	Indecent exposure of person.....		19		
62	Sodomy and other unnatural practices.....		62	3	
62	Assault with intent to commit rape.....		4		
62	Other similar offenses.....		45		
62	Conduct (not involving drunkenness) causing ar- rest and conviction by civil authorities.....		75		
62	Loaning money at usurious rates of interest.....		7		
62	Use or possession of narcotics.....		24		
55	Offenses against private property.....		1		
62	Offenses against private property.....		18		

Classification of offenses tried by all courts-martial—Continued.

Article of War.	Description of offense.	Number of convictions.			
		Officers.	Enlisted men.	General prisoners.	Militia.
62	Offenses to the disgrace of the uniform and service.....		63		
62	Profane or provoking or threatening or indecent language or creating a disturbance in quarters.....		170		
62	Gambling in post or quarters.....		29		
62	Attempts to commit suicide.....		1		
62	Disorderly conduct and neglects not classified.....		238		
62	Dirty arms, accouterments, or clothing.....		53		
62	Visiting neighboring towns without pass.....		34		
62	Wearing improper uniform or civilian clothing without authority.....		51		
62	Fraudulent use of class A card.....		7		
62	Having contraband in guardhouse.....		12		
62	Missing or sailing on transport without authority.....		12		
62	Prisoner refusing or failing to work.....		21		
62	Resisting arrest by or interfering with civil authorities.....		3		
62	Trespass and loitering around private quarters.....		20		
62	Offenses against civilians.....		15		
62	Offenses not otherwise classified.....	6	1,023	4	

Trials by summary courts.

Posts.	Average of enlisted strength present on last day of each month.	Total number of trials by summary courts during year.	Percentage of trials by summary courts during year.
Alcatraz Island, Cal.....		245	
Apache, Fort, Ariz.....			
Armstrong, Fort, Hawaii.....		63	
Army and Navy General Hospital, Arkansas.....			
Baker, Fort, Cal.....	339	118	34.8
Balboa, Canal Zone.....			
Baltimore, Md., coast defenses of.....	238	119	50
Barry, Fort, Cal.....	231	82	35.5
Bayard, Fort, N. Mex.....			
Benicia Arsenal, Cal.....		8	
Benj. Harrison, Fort, Ind.....	18	14	.77
Bliss, Fort, Tex.....			
Boston, Mass., coast defenses of.....	1,351	718	53
Brady, Fort, Mich.....	8		
Cape Fear, N. C., coast defenses of.....	226	82	36
Casey, Fort, Wash.....	338	36	10.6
Charleston, S. C., coast defenses of.....	367	133	36
Chesapeake Bay, coast defenses of.....	1,063	276	26
Clark, Fort, Tex. ¹			
Columbia, Fort, Wash.....			
Columbus Barracks, Ohio.....	1,118	251	.22
Corozal, Canal Zone.....	461	294	63
Cristobal, Canal Zone.....	19	30	1.80
Crook, Fort, Nebr.....	13	2	.15
D. A. Russell, Fort, Wyo.....	385	208	.54
Davis, Fort, Alaska.....	99	49	49.5
Delaware, coast defenses of.....	238	114	47
Department Headquarters, Hawaiian Department.....	21	2	9.9
Department Hospital, Hawaiian Department.....	86	56	65.2
DeRussy, Fort, Hawaii.....		124	
Des Moines, Fort, Iowa.....	17	3	.17
Douglas, Fort, Utah.....	24		
Eastern N. Y., coast defenses of.....	668	212	31
Empire, Canal Zone.....	1,759	833	47
E. S. Otis, Camp, Canal Zone.....	1,675	592	35
Ethan Allen, Fort, Vt.....	1,097	436	40
Flagler, Fort, Wash.....	325	47	14.5
Gaillard, Camp, Canal Zone.....	990	262	26
Galveston, Tex., coast defenses of.....	560	245	44
Gatun, Canal Zone.....	254	99	38
George Wright, Fort, Wash.....	256	169	66
Gibbon, Fort, Alaska.....	215	73	34.0
Grant, Fort, Canal Zone.....	671	490	73
Harrison, Fort, Mont.....			
Henry Barracks, P. R.....	157	25	16

Trials by summary courts—Continued.

Posts.	Average of enlisted strength present on last day of each month	Total number of trials by summary courts during year.	Percentage of trials by summary courts during year.
Huschuca, Fort, Ariz. ¹			
Jay, Fort, N. Y.	284	106	37
Jefferson Barracks, Mo.	1,305	404	30
Kamehameha, Fort, Hawaii		121	
Keogh, Fort, Mont.			
Key West Barracks, Fla.	143	30	21
Lawton, Fort, Wash.	353	220	62.3
Leavenworth, Fort, Kans.	274	206	75
Letterman General Hospital, California.	169	64	37.9
Liscum, Fort, Alaska.	76	24	31.6
Logan, Fort, Colo.	391	49	12
Logan H. Roots, Fort, Ark.	17	4	23
Long Island Sound, coast defenses of.	1,446	547	38
McDowell, Fort, Cal.		303	
McIntosh, Fort, Tex. ¹			
McPherson, Fort, Ga.	39	6	15
Mackenzie, Fort, Wyo.	13	2	15
Madison Barracks, New York.	560	346	62
Mason, Fort, Cal.	42	2	4.8
Meade, Fort, S. Dak.	214	110	51
Miley, Fort, Cal.	226	54	23.9
Missoula, Fort, Mont.	14	7	50
Mobile, Ala., coast defenses of.	182	79	43
Myer, Fort, Va.	801	262	33
Narragansett Bay, coast defenses of.	887	413	46
New Bedford, Mass., coast defenses of.	140	70	50
New Orleans, La., coast defenses of.	168	46	27
Niagara, Fort, N. Y.	17	6	36
Oahu, Hawaii, coast defenses of.	945	433	45.8
Oglethorpe, Fort, Ga.	871	523	60
Omaha, Fort, Nebr.	11		
Ontario, Fort, N. Y.	268	89	33
Panama, coast defenses of.			
Pensacola, Fla., coast defenses of.	520	225	43
Plattsburg Barracks, N. Y.	869	222	25
Porter, Fort, N. Y.	37	6	16
Portland, Me., coast defenses of.	1,318	449	34
Portsmouth, N. H., coast defenses of.	143	78	54
Potomac, coast defenses of.	189	130	68
Presidio of Monterey, Cal.	333	119	35.7
Quarry Heights, Canal Zone ¹	174	707	4.04
Randolph, Fort, Canal Zone.	135	14	10
Riley, Fort, Kans.	118	127	1.07
Robinson, Fort, Nebr.	172	101	.58
Rock Island Arsenal, Ill.	136	17	.12
Rosecrans, Fort, Cal.	398	163	40.9
Ruger, Fort, Hawaii.		25	
St. Michael, Fort, Alaska.	67	28	41.8
Sam Houston, Fort, Tex. ¹			
Sandy Hook, N. J., coast defenses of.	672	207	31
San Juan, P. R.	524	99	19
Savannah, Ga., coast defenses of.	376	127	34
Schofield Barracks, Hawaii.	5,443	2,115	38.8
Shafter, Fort, Hawaii.	1,906	766	40.1
Sheridan, Fort, Ill.	261	163	.62
Sherman, Fort, Canal Zone.	345	200	57
Signal Corps Aviation Corps.		15	
Sill, Fort, Okla. ¹			
Slocum, Fort, N. Y.		304	
Snelling, Fort, Minn.	24	2	.08
Southern New York, coast defenses of.	929	479	51
Stevens, Fort, Oreg.	274	62	22.6
Tampa, Fla., coast defenses of.	160	77	48
Thomas, Fort, Ky.	29	8	28
United States Disciplinary Barracks, Fort Leavenworth, Kans.	225	121	.53
Valdez, Alaska.	124	3	2.4
Vancouver Barracks, Wash.	915	248	27.1
Walter Reed General Hospital, District of Columbia.		128	
Ward, Fort, Wash.	133	38	28.6
Washington Barracks, District of Columbia.	730	110	15
Wayne, Fort, Mich.	13	3	.23
West Point, N. Y.	707	206	28.9
William H. Seward, Fort, Alaska.	225	86	38.2
Winfield Scott, Fort, Cal.	1,180	355	30.1
Wood, Fort, N. Y.	126	30	24
Worden, Fort, Washington.	636	127	20
Yellowstone, Fort, Wyo.		79	

Trials by summary courts—Continued.

Posts.	Average of enlisted strength present on last day of each month.	Total number of trials by summary courts during year.	Percentage of trials by summary courts during year.
Camps of instruction.....		451	
Camp at San Diego, Cal.....	246	92	37.4
Camp at Calexico, Cal.....	236	67	28.3
Miscellaneous:			
Augusta, Frankford, Watertown, and Watervliet Arsenals and Springfield Armory.....		68	
Transports.....		79	
Recruiting and signal stations in the field, and miscellaneous.....		325	
Twenty-seventh Infantry ³	890	47	5.00
Ordnance Depot, Hawaii.....	12		
PHILIPPINE ISLANDS. ⁴			
Angur Barracks.....	854	142	16.63
Camp Eldridge.....	333	204	61.26
Camp Gregg ⁵	222	22	9.91
Camp John Hay.....	483	63	13.04
Camp Keithly.....	719	70	9.72
Camp McGrath.....	563	471	83.66
Camp Nichols.....	96	17	17.71
Camp Overton.....	418	44	10.53
Camp Stotsenburg.....	1,628	688	42.26
Fort Mills.....	4,296	1,110	25.83
Fort San Pedro.....	329	54	16.41
Fort William McKinley.....	2,348	1,574	67.04
Ludlow Barracks.....	851	69	8.11
Manila:			
Cuartel de Espana, Department Hospital, and Ordnance Depot...	855	441	51.58
Pettit Barracks.....	444	44	9.91
Regan Barracks.....	573	331	57.79
Warwick Barracks.....	424	56	13.21
Miscellaneous camps, stations, etc.....		37	
Transports.....		62	

RECAPITULATION.

Eastern Department.....	18,410	8,132	38.70
Central Department.....	4,632	2,015	43.5
Western Department.....	8,269	3,525	33.10
Southern Department ¹			
Hawaiian Department.....	8,413	3,372	40.00
Philippine Department.....	15,436	5,499	35.62
United States Military Academy.....	707	205	29.00
Canal Zone.....	7,373	3,583	49.00
China expedition.....	1,249	1,097	88.00

¹ The frequent shiftings of troops pertaining to posts and camps in the Southern Department during the fiscal year in connection with border patrols make it impracticable to complete statistics which would be of any practical value.

² The summary court at Quarry Heights tries offenders from all posts on the Canal Zone for offenses committed at or in the vicinity of Panama. The number of trials of members of the provost guard company was 50; hence the percentage given above would not be an indication of the discipline of the command, the actual percentage of which is 28.

³ Twenty-seventh Infantry stationed on Canal Zone September, October, November, December, 1915, and January, 1916.

⁴ July 1, 1915, to May 31, 1916.

⁵ Abandoned.

APPENDIX B.

EXTRACTS FROM REPORTS AND RECOMMENDATIONS OF JUDGE ADVOCATES OF DEPARTMENTS AND WEST POINT.

EASTERN DEPARTMENT.

There have been very few cases of duplication of charges requiring correction before reference for trial or reduction of sentence because of such duplication.

The failures to comply with the requirements of paragraph 8, General Orders, No. 70, War Department, 1914, have been constantly decreasing and are now quite unusual. The same may be said of paragraph 9 of said order.

There were very few cases, only two or three as recalled, in which the court spread upon the record its reasons upon which its findings and sentence were based.

(Signed)

Lieut. Col. DODDS.

SOUTHERN DEPARTMENT.

The daily routine work of this office throughout the year has included notation of all points arising which suggest the advisability of changes in the procedure or in the regulations pertaining to it. From time to time, when the importance of the points arising seemed to warrant such action, recommendations relative thereto have been submitted to the War Department. The following miscellaneous recommendations gleaned from the notes made, while of minor importance, are nevertheless submitted as reflecting desirable changes resulting from questions of a routine nature.

Paragraph 126, Army Regulations, provides for discharge without trial of a deserter found physically unfit for service. This paragraph should, I think, contain a qualification so as to preclude discharge under its provisions when the unfitness for service is due to insanity.

Paragraph 139, Army Regulations, provides, *inter alia*, for the discharge of an enlisted man on account of a sentence to imprisonment by a civil court, whether suspended or not. This provision should include discharge because of any sentence of a civil court resulting in imprisonment, whether suspended or not, as well as sentences resulting in probation or parole, either of which status is, I believe, inconsistent with military service.

Paragraph 928, Army Regulations, provides designations for different classes of prisoners. I think prisoners sentenced to dishonorable discharge in whose cases the dishonorable discharge has been suspended should have a designation different from general prisoners. I suggest that they be designated as "disciplinary prisoners."

Deserters' descriptive circulars issued by the War Department are useful in connection with the action of reviewing authorities upon the records of their trials, and it is suggested that officers preferring charges for desertion be required to attach thereto the descriptive circular of the alleged deserter.

It is important that all decisions of the Judge Advocate General be available at Department Headquarters for use in the office of Department Judge Advocates, and I, therefore, suggest that photographic copies of all opinions issued by the Judge Advocate General be furnished each Department Judge Advocate.

If it is the policy of the War Department to give effect to the provisions of the act of March 4, 1915, in so far as it provides for honorable restoration to duty of general prisoners confined elsewhere than in the Disciplinary Barracks, I think that the service should be furnished with appropriate regulations.

The service at large is, I think, unacquainted with that provision of the act of April 25, 1914, which declares that no distinction shall be made between the Regular Army, the Organized Militia while in the service of the United States, and the volunteer forces in respect to the eligibility of any officer of said Army, militia, or volunteer forces for service upon any court-martial, and which revokes section 6 of the act of May 27, 1908, requiring that the majority membership of courts-martial for the trial of officers or men of the militia when in the service of the United States shall be composed of militia officers. It is suggested that the attention of the service at large be invited to this unfamiliar provision of law.

Six hundred and ninety-eight general court-martial charges, out of a total of 892 during the year, contained errors which necessitated either minor or material amendment in this office. These errors were due principally to carelessness on the part of the officers preferring them, and to their failure to conform to the prescribed models for charges. I do not believe that this carelessness can be corrected and I consider it quite the proper function for the Department Judge Advocate's office to correct charges before reference to courts.

Sixty-three trials by general courts-martial out of 839 in this department during the year were held in order that the accused might be discharged from the service because of five previous convictions. When the important and varied duties of the commissioned personnel along the Mexican border during the past year and the difficulty of holding meetings of general courts-martial are considered, I think the above fact is a strong argument for an administrative discharge by department commanders on the approved action of boards of officers, and I therefore renew a recommendation recently made that the discharge of soldiers with five or more previous convictions by department commanders upon the approved action of boards of officers be authorized.

The average period of time accused were in confinement before final action of the reviewing authority upon the proceedings amounted for the past year in this department to 42 days. I consider this average large, particularly when it is remembered that depositions are not extensively used in the trial of cases in this department. The delays have been due principally to the frequent moving of officers and enlisted men, necessitating frequent changes of courts, of judge advocates, transfers of prisoners, second reference of charges, and to the difficulty of securing military witnesses. In this connection I desire to renew a recommendation that I have previously made to the effect that time spent by accused in confinement awaiting trial and result of trial shall be awarded as good-conduct abatement, provided conduct while in confinement during service of sentence warrants such abatement. Such a scheme would, I think, materially improve our system and prevent injustice due to long periods of confinement awaiting trial and result of trial and preclude any criticism of that system. The department judge advocate should be intrusted with the duty of preventing trials from being delayed unnecessarily because of a knowledge on the part of those concerned that the abatement would prevent any injustice due to delay.

I desire also again to submit a recommendation that I have frequently made with a view to securing an improvement of procedure in trials of desertion cases. I recommend that when a desertion occurs the organization commander be required to make a thorough investigation and to secure by means of depositions all pertinent testimony as to the circumstances attendant upon the offenses discovered to have been committed and to transmit the charges with accompanying papers, including the depositions so secured, to the War Department to remain until notification is received there of the deserter's return to military control, and that the papers then be mailed directly to the proper commanding officer for investigation and action under the provisions of paragraph 954, Army Regulations. It has been extremely difficult to try deserters from the organizations in Mexico who absented themselves before their organizations entered that country. The records of these organizations were left in the United States and have not been accessible to organization commanders, so that long periods of confinement awaiting trial have resulted. I do not think that the ninety-first article of war, which permits the use of depositions if taken upon reasonable notice to the opposite party, would be interpreted to preclude their use when taken in the manner above suggested, provided, of course, that the accused consents to their use. If he does not consent, then the delay is his own fault and not that of the Government.

The number of troops in the department has increased during the last six months from a total of about 25,000 to a total of approximately 130,000. During this time the work of this office has been carried on by exactly the same personnel that was on duty when the department contained by approximately one-fifth as many troops and without any necessity of a change in the system in vogue, and without any necessity of a subdivision of the court-martial jurisdiction of the department commander. In fact the department commander has recently recommended that no such subdivision of the duties of this office be made, but that the entire court-martial work of the department continue to be conducted from this office as heretofore.

During the last few months the number of troops in the department has increased very materially, with a natural increase in the work of this office, but it has been impossible to secure additional clerks to assist the present clerical force in handling the large amount of additional work thrust upon it. This fact necessitates, in my opinion, the repetition of the recommendation so frequently made by department judge advocates that judge advocates' clerks should be under the exclusive jurisdiction of the Judge Advocate General in order that assignments and promotions of these clerks may be more equitably and expeditiously accomplished.

In conclusion, I desire to say that the very varied and extensive nature of the work of this office for the past year has not only afforded a splendid test of the procedure in vogue in the Judge Advocate General's Department, but has demonstrated, in my opinion, that no material modification of that procedure, as exemplified in the work here, is necessary.

(Signed) Capt. Howze.

HAWAIIAN DEPARTMENT.

In the last annual report of this office the desirability of making it easier to get rid of worthless soldiers other than by general court-martial on five previous convictions was stressed. In this connection attention is invited to the amended excerpt from the one recommendation made by the undersigned on June 17, 1911. * * *

It is submitted that this is still incomplete and inadequate in that it applies money voted by the people for their defense to returning to the places of acceptance former soldiers found to be of no value in such defense.

It should be impossible for a soldier who, either because of the existence of disqualification or because of a vicious feigning of such disqualification, has earned a discharge under this paragraph to enter or reenter, in time of peace, as a haven or asylum, any branch of the public service.

If these two changes were written into the law and were made known to all men on entering the service, they would result in great improvement.

It is recommended that the legislation necessary to effect these changes be secured; that no discharge under paragraph 148½, Army Regulations, be ordered until the proceedings have been passed upon by the judge advocate of the general court-martial jurisdiction; that the payment to interpreters of \$5 a day be authorized; and that judge advocates' clerks be placed in a separate class and promoted therein.

(Signed) Capt. GALLOGLY.

PHILIPPINE DEPARTMENT.

In the last annual report of this office the hope was expressed that the Philippine Legislature would pass an act similar to section 35, Federal Penal Code, punishing the unauthorized purchase of clothing and other Government property from soldiers. Such a law has been enacted. The terms are substantially identical with those of section 35. No statistics are yet available as to the number of prosecutions under this new law.

The average period of time the accused has been in confinement under general court-martial charges before final action of the reviewing authority on the proceedings has been 37 days. The period was the same for the year ending June 30, 1915. Effort has been made to reduce this period, but the time required to transmit mail between the southern islands and Manila and the absence of a sufficient number of competent stenographers to report proceedings of courts convened in the vicinity of Manila are two elements that have made it impracticable to reduce it further.

During the past year progress has been made in clearing up titles to military reservations. The title of the United States to the military plaza in Manila has been decided to include the filled-in land between the plaza and the Cavite Boulevard.

(Signed) Lieut. Col. MORROW.

WEST POINT.

The statement of evidence submitted with a view to meeting the requirements of paragraph 954, Army Regulations, frequently consists solely of a number of papers bearing signed or unsigned statements of witnesses whose testimony is relied upon by the officer preferring the charges. This practice multiplies papers and seldom results in presenting for consideration a complete and logical summary of the available evidence. It is my opinion that more satisfactory results would be obtained if the officer preferring the charges were required by regulations to submit a communication, signed by himself, setting forth in logical order a summary of the testimony that may be expected of each witness, together with an appropriate reference to any other available evidence. The closer study which the officer preferring the charges would find it necessary to make in order to prepare a complete and logical written summary of available evidence would tend to reduce the number of charges requiring material amendment before reference to general courts-martial or return for reference to inferior courts. Such a summary would enable the officer detailed to investigate the case to make his report with the least possible delay and also enable the judge advocate to go to trial with the greatest promptness. The general effect of the adoption of the plan outlined would, it is believed, be to lead to more accurate pleading and to greater promptness in the final disposition of cases.

(Signed) Lieut. Col. KREGER.

In view of the fact that liquors of all kinds can be purchased by our soldiers in the immediate vicinity of barracks for less than one-third what they would cost in the United States, the number of trials in this command is small.

Besides all kinds of liquors, cocaine and morphine are easily obtained here. Every effort is made to prevent our men from becoming addicted to the use of these drugs, and those found guilty of using them are, as a rule, sent to Alcatraz, in order to give them a chance to break the habit. I believe that here, as in most places, the great majority of offenses committed by enlisted men are due, directly or indirectly, to drugs or liquor. The fact that this place is so accessible to all sorts of vice and is not supplied with wholesome amusements on the outside undoubtedly increases the number of trials.

(Signed) Col. HALE.

CENTRAL DEPARTMENT.

None.

(Signed) Col. HULL.

WESTERN DEPARTMENT.

None.

(Signed) Lieut. Col. GOODIER.

REPORT OF THE QUARTERMASTER GENERAL.

REPORT OF THE QUARTERMASTER GENERAL.

WAR DEPARTMENT,
OFFICE OF THE QUARTERMASTER GENERAL OF THE ARMY,
Washington, September 5, 1916.

The SECRETARY OF WAR.

SIR: I have the honor to submit the annual report of the operations of the Quartermaster Corps for the fiscal year ended June 30, 1916.

PERSONNEL.

Commissioned.—On June 30, 1915, the commissioned strength, Quartermaster Corps, was as follows:

Major general.....	1
Brigadier generals.....	2
Colonels.....	14
Lieutenant colonels.....	18
Majors.....	48
Captains.....	102
Total.....	185

The two vacancies in the grade of lieutenant colonel which existed June 30, 1915, remain unfilled.

Of the 14 colonels in the corps June 30, 1915, 1 was retired and the vacancy filled by the promotion of a lieutenant colonel who, later in the year, was also retired and his vacancy filled by the promotion of a lieutenant colonel, leaving the number of colonels, June 30, 1916, 14.

Of the 18 lieutenant colonels in the corps June 30, 1915, 2 were promoted to colonels and the vacancies filled by the promotion of 2 majors, leaving a total number of lieutenant colonels, June 30, 1916, 18.

Of the 48 majors in the corps June 30, 1915, 4 were relieved, 2 were promoted, 2 were retired, 1 died, reducing the number from 48 to 39. Nine majors were detailed in the corps, bringing the total number of majors in the corps, June 30, 1916, to 48, the number authorized by law.

Of the 102 captains in the corps June 30, 1915, 45 were relieved from detail and 1 was killed, reducing the number to 56. Forty-six captains were detailed in the corps from captains of the line, making a total of 102 in the corps June 30, 1916.

The duties being performed by officers of the Quartermaster Corps on June 30, 1916, are shown in Exhibit No. 1.

Quartermaster sergeants, Quartermaster Corps.—During the year 25 quartermaster sergeants, Quartermaster Corps, were retired, 6 died, 3 transferred to the permanent school detachment, 2 discharged by purchase, 1 discharged to accept commission in National Guard,

and 1 dishonorably discharged, making a total of 38 vacancies, 31 of which were filled from eligibles who had qualified for appointment to the position, leaving 7 vacancies June 30, 1916.

Pay clerks.—On June 30, 1915, there were 74 pay clerks in the service. Between June 30, 1915, and June 30, 1916, 1 pay clerk was retired from the service, he having been found by an Army Retiring Board incapacitated for active service on account of disability incident thereto, leaving a total of 73 pay clerks in the service on June 30, 1916.

The regular annual educational examinations of enlisted men for appointment to the higher grades of the Quartermaster Corps (quartermaster sergeants, Quartermaster Corps, excepted) were held on March 6, 1916, pursuant to the provisions of Circular No. 18, Office of the Quartermaster General, 1915. Attached hereto, as Exhibit 2, is a statement showing the number of persons examined and the number of appointments made of those who attained an eligible rating of both the educational and noneducational grades during the period July 1, 1915, to June 30, 1916.

On June 30, 1916, a total of 1,941 civilian employees in the United States and 243 in the Philippines, together with 2,045 enlisted men of the line on extra duty in the Quartermaster Corps, had been replaced by 5,379 enlisted men of the Quartermaster Corps.

Attached hereto, as Exhibit 3, is a statement showing the number of men by grades apportioned to the different departments and other stations and to Hawaii and the Philippines, the number of men in the service, and the number of vacancies as of June 30, 1916.

Civilian employees.—There are distributed throughout the United States and its insular possessions approximately 7,900 civilian employees.

NATIONAL CEMETERIES.

There are 83 national cemeteries, classified as follows:

First class.....	31	Third class.....	6
Second class.....	18	Fourth class.....	28

The interments therein during the fiscal year were 1,752, the total at the close of the year being 219,026 known, 153,138 unknown; grand total, 372,164.

The appropriation for maintaining and improving national cemeteries, including fuel for superintendents, pay of laborers and other employees, purchase of tools and materials, was \$120,000. From this sum the buildings, drives, walks, walls, fences, monuments, etc., have been kept in proper condition, so far as practicable, the most important improvements being made at the following cemeteries:

Alexandria, La., new 45-foot well.....	\$250. 00
Arlington, Va.:	
Repairing Mansion House.....	1, 140. 00
Providing parking space for automobiles.....	250. 00
New hot-water boiler for greenhouse.....	350. 00
Baton Rouge, La., new 75-foot steel flagstaff.....	315. 00
Chalmette, La., window screens and screened balcony for lodge.....	425. 00
City Point, Va., new 75-foot steel flagstaff.....	514. 00
Fort Donelson, Tenn., new wire fence around reservation.....	500. 00
Gettysburg, Pa., resurfacing lower road.....	300. 00
Mobile, Ala., new concrete sidewalks.....	354. 00

REPORT OF THE QUARTERMASTER GENERAL

11

Newbern, N. C. reconstruction of lodge.....	2	00
Raleigh, N. C. new buildings and bathroom in July.....	1	00
Installation of water and sewer system.....	1	00
St. Augustine, Fla. new sink and drain.....	1	00
Yorktown, Va. repairs to bath and sink.....	1	00
Yorktown Museum repairs and repainting of building.....	14	00

The unexpended balance of the appropriation at the end of the fiscal year was \$35.56.

Superintendents.—The appropriation for the pay of superintendents of national cemeteries, fiscal year 1916, was \$63,120; amount expended, \$63,101.81, leaving an unexpended balance of \$18.19.

There are 76 superintendents of national cemeteries authorized by law. Seven cemeteries were under charge of caretakers during the fiscal year. There have been three casualties, all by death, and three new appointments have been made.

Governmental roads.—The appropriation for repairing the 17 roadways to national cemeteries maintained by the Government was \$12,000, of which \$11,897.50 was expended, leaving an unexpended balance of \$102.50.

The most important repairs have been made to the following roads:

Antietam, Md.....	\$650	00
Balls Bluff, Va.....	200	00
Corinth, Miss.....	126	00
Fredericksburg, Va.....	238	00
Mound City, Ill.....	2	558 00
Natchez, Miss.....	375	00
Newbern, N. C.....	2	00 00
Salisbury, N. C.....	447	00
Springfield, Mo.....	3	621 00
Staunton, Va.....	225	00
Vicksburg, Miss.....	515	50

Post cemeteries.—Approximately \$1,900 was expended in the repair and maintenance of post cemeteries during the fiscal year.

Headstones.—A contract was entered into July 26, 1915, for furnishing 14,000 headstones for unknown graves of Union soldiers, sailors, and marines, and Confederates buried in national cemeteries and civilian employees buried in post cemeteries, under the acts of March 3, 1873, February 3, 1879, March 9, 1906, April 28, 1904, and June 30, 1906, at \$2.39 each.

Eleven thousand eight hundred and sixty-one headstones were furnished and shipped for this purpose during the fiscal year.

Disposition of remains.—Appropriation for fiscal year 1916, \$57,500; expended, \$53,789.76; leaving a balance of \$3,710.24.

The following disposition was made of the remains of officers and enlisted men of the Army (active) and the remains of civilian employees in the employ of the War Department who died abroad, in Alaska, in the Canal Zone, in Mexico, or on Army transports, or who died while on duty in the field, or at military posts within the limits of the United States:

Received at San Francisco, Cal. (including the remains of 24 civilians and 13 remains handled for the Navy Department):	
Shipped home.....	49
Delivered to relatives.....	15
Interred in San Francisco (Cal.) National Cemetery.....	36
Awaiting disposition July 1, 1916.....	6

Buried in Alaska.....	3
Received at Seattle, Wash., from Alaska and shipped home.....	1
Received at New York from Panama and shipped home.....	4
Received at New Orleans from Panama and shipped home.....	1
Interred in Canal Zone, Panama.....	6
Interred in Porto Rico.....	4
	— 19
In the United States and Mexico:	
Missing.....	5
Drowned, not recovered.....	5
Shipped home.....	311
Interred in post or national cemeteries.....	144
	— 465
Total.....	590

To provide for the preparation of the remains of officers, enlisted men, and civilian employees of the Army and transportation of their remains to their homes when desired, contracts were entered into with local undertakers at all military posts for this service, which included embalming, furnishing coffins, caskets, and shipping cases.

A burial corps was organized by the department quartermaster, Southern Department, under the charge of an experienced embalmer, for service in recovering the bodies of soldiers who might be killed or die in Mexico.

During the year the following remains of soldiers were removed from fields and abandoned cemeteries and reinterred in national cemeteries. Two known soldiers from near Billings, Mont., to the Custer Battlefield (Mont.) National Cemetery; 15 unknown remains at City Point, Va., to the national cemetery at that place; and 6 remains of civilians from the abandoned post cemetery of Fort Washington, Md., to the Arlington National Cemetery.

During the year the remains of a British sailor who died in 1855, and of a United States Navy seaman, who died in 1850, were removed, with the head and foot stones at their graves, from the Fort Baker, Cal., military reservation to the cemetery at the Mare Island Navy Yard, Cal.

Interment of indigent soldiers.—Forty claims, amounting in the aggregate to \$1,760.67, have been settled under the provisions of the act for expenses of burying in the Arlington National Cemetery, or in the cemeteries of the District of Columbia, indigent ex-Union soldiers, ex-sailors, or ex-marines of the United States service, etc., who have been honorably discharged or retired and who died in the District of Columbia. The amount allowed in each case, exclusive of cost of grave, is \$45. Seven claims of burial expenses under this law were rejected and two claims are awaiting settlement. One-half of the expenses incurred for this purpose is payable by the District of Columbia.

Revocable licenses.—Revocable licenses authorizing the use of portions of national cemetery reservations or Government approach roadways to national cemeteries have been issued by the Secretary of War, as follows:

Annapolis, Md., to county commissioners for Anne Arundel County, Md., to lay an 8-inch sewer pipe on the cemetery reservation; October 30, 1915.

City Point, Va., to E. I. DuPont de Nemours & Co., to lay a 6-inch water pipe under the approach roadway; December 10, 1915.

City Point, Va., E. I. DuPont de Nemours & Co., to lay two water pipes, one 4 inches and one 6 inches in diameter, across the approach roadway; February 14, 1916.

Corinth, Miss., to city of Corinth, to lay concrete sidewalk 4 feet wide along the approach roadway; August 12, 1915.

Fort McPherson, Nebr., to Farmer's Cooperative Telephone Association, Brady, Nebr., to erect three telephone poles on the reservation, to string wires thereon, and maintain the same; August 2, 1915.

Newbern, N. C., to William T. Hill, for himself and 17 other residents of Riverview, Newbern, to cross the approach roadway with water and sewer pipes from the east to west sides thereon, in order that water and sewer facilities may be given to the residents of Riverview; September 2, 1915.

Staunton, Va., to W. B. Johnson, to construct a crossing over the approach roadway by placing a concrete slab across the gutter at station No. 31; July 17, 1915.

A revocable lease issued by the Secretary of War, March 25, 1916, to Jacob Hankins, of Brady, Nebr., for a term of one year from April 1, 1916, for cultivation of a portion of the Fort McPherson National Cemetery Reservation, containing from 6 to 8 acres, the lessee agreeing to seed the tract to oats, one-fourth of the crop to be the property of the United States.

The depot quartermaster, Jeffersonville, Ind., reported on October 18, 1915, that by an act of the legislature of the State of Tennessee, fifty-eighth general assembly, 1913, approved April 14, 1913, the corporate limits of the town of Dover were extended so as to include the Government approach roadway to the Fort Donelson National Cemetery, and under the proviso limiting the expenditure of the appropriation "Repairing roads to national cemeteries" to roads owned by the United States within any town or village the authorities of the town of Dover were accordingly advised that the Government will make no repairs on the roadway in the future, the title of the United States to the roadway being only a right of way.

Monuments have been erected during the fiscal year by the State of Minnesota in the national cemeteries at Andersonville, Ga., Little Rock, Ark., and Memphis, Tenn., in memory of its soldiers buried there who died during the Civil War.

In October, 1915, a monument which had been erected on Flamenco or Deadmans Island, in the Bay of Panama, by the officers and crew of the U. S. S. *Lancaster*, to the memory of nine shipmates who died and were buried there in 1860 and 1861, and subsequently transferred to the Ancon Cemetery, Canal Zone, was brought on the U. S. S. *Ohio* to Philadelphia, and from that point shipped to and reerected in the Arlington National Cemetery. When the monument was removed to Ancon Cemetery it was also intended to remove the remains thereto, but no trace of them was found.

On August 4, 1915, a storm caused considerable damage to the Poplar Grove National Cemetery, Petersburg, Va., destroying 138 trees, damaging the lodge and outbuildings, and destroying the wagon shed, part of inclosing wall was blown down, the flagstaff bent, and a large number of headstones were broken, etc., which required an expenditure of \$1,225 to put the cemetery in good condition.

On September 29, 1915, a hurricane also caused damage to the Chalmette National Cemetery and the national cemeteries at Baton

Rouge and Port Hudson, La. At Chalmette 78 trees were destroyed, part of inclosing wall was blown down, lodge was badly damaged, kitchen addition damaged, wagon shed demolished, stable unroofed and walls blown down, rostrum wrecked, and many headstones broken. Expenditures to place the cemetery in good condition amounted to \$4,204. At the Baton Rouge and Port Hudson National Cemeteries \$30 each was expended for repairs.

On October 4, 1915, a flood at the United States National Cemetery, Mexico City, Mexico, washed away a large portion of the inclosing wall and otherwise damaged the cemetery, repairs being made at a cost of \$2,150.

In April, 1916, a bronze tablet, including bronze supports for same, was erected near the tomb of Maj. Charles L'Enfant, in the Arlington National Cemetery, containing the facsimile of the inscription that appears on the tomb, at a cost of \$297.

On May 9, 1916, the superintendent's lodge at the Mill Springs National Cemetery, Somerset, Ky., was destroyed by fire, and a thorough investigation of the matter by the depot quartermaster, Jeffersonville, Ind., failed to disclose the cause. Steps are being taken to reconstruct the lodge.

I can not too earnestly invite attention to the inadequacy of the appropriation made annually (\$120,000) for the care and maintenance of the 83 national cemeteries under the control of this office. Of this sum 58½ per cent is expended annually in the hire of labor in keeping these cemeteries in proper condition, which leaves but a very small sum available for repair to lodges, outbuildings, water supply and sewer systems, reservation walls and fences, roads and walks, trimming trees, etc., or the construction of new lodges and outbuildings destroyed by fire, or of repairing damages occasioned by hurricanes and storms.

During the past fiscal year the amount required to repair damages by storms at three cemeteries in the South and in Mexico City aggregated \$6,414, and a new lodge is required to replace one destroyed by fire at the Mill Springs (Ky.) National Cemetery, which will cost approximately \$4,500.

The price of labor and material has so far advanced in the past year or two that most needed improvements and repairs at many of the national cemeteries have been postponed, or only partially made, for want of funds. To meet this condition it is recommended that in submitting estimates for the fiscal year 1918 the sum asked for "For care and maintenance of national cemeteries" be increased to \$150,000.

CLAIMS.

Miscellaneous accounts.—During the fiscal year there were received for action 49 accounts for payment for services due to deceased civilian employees of the Quartermaster Corps, amounting in the aggregate to \$1,875.46. One account, amounting to \$58, was allowed for payment, and 48 accounts, amounting to \$1,817.46, were transmitted to the Treasury or other departments for settlement.

Damage claims.—At the beginning of the fiscal year there were on file in the office 16 claims for damages to private property of citizens of the United States and its island possessions, amounting in the aggregate to \$715.95. Thirty-six claims were received during the

fiscal year, amounting to \$3,564.89. Total on hand and received. 52 claims, amounting to \$4,280.84.

In the estimates prepared in this office for the War Department and submitted to Congress at its present session in December last, the sum of \$5,000 was included for the payment of damage claims then on file in the office and such additional claims as were subsequently received and approved by the Secretary of War after an investigation to ascertain what amount was justly due to the claimants. This sum, it is understood, is included in the bill making appropriations for the support of the Army during the current fiscal year, which is now pending in Congress. As the appropriation of \$5,000 will exceed the amount required for payment of the damage claims now on file in the office, if that amount is made available, the balance, after payment of the claims now on file, will be used to pay such additional claims of this character as may be received during the present fiscal year.

Confederate horse claims.—At the beginning of the fiscal year there was on file in this office 421 claims for payment for horses and baggage taken from paroled Confederate soldiers in violation of the terms of the surrender of the Confederate armies at Appomattox in April, 1865, presented to this office under the act of Congress approved February 27, 1902.

The time limit fixed by law for the presentation of these claims having expired on June 25, 1912, no claims were received during the fiscal year.

One claim was disallowed during the fiscal year, and two claims amounting to \$260 were allowed, leaving on hand at the close of the last fiscal year 418 claims.

It is believed that of these 418 claims, nearly, if not all, should be dropped as abandoned and the papers sent to the permanent files of the office. Many of the claimants it is presumed have died since their claims were presented, and others have been abandoned by the claimants for want of official evidence to enable favorable action to be taken upon them.

There remained at the close of the fiscal year of the appropriation made by Congress for the payment of these claims the sum of \$5,399.05.

NEWSPAPERS AND PERIODICALS.

For the supply of newspapers and periodicals for the use of the enlisted men of the Army there was authorized expended during the fiscal year the sum of \$7,149.13, and the amount expended for supply of reading matter for the troops serving in the Philippine Islands was, as reported, \$632.74, making a total of \$7,781.87 authorized expended for this purpose.

Reading matter is being supplied during the current fiscal year to all posts and stations in the United States, including the troops serving on the Mexican border, and also the troops serving in Alaska, the Canal Zone, and the island possessions.

FINANCE AND ACCOUNTING.

Apportionments.—Consolidated financial statement, fiscal year ended June 30, 1916. (Exhibit No. 4.)

Detailed statement of expenditures of the Quartermaster Corps for the fiscal year ended June 30, 1916, itemized under different appropriations. (Exhibit No. 5.)

Statement of account of the Philippine Islands (Exhibit No. 6):

Letters, etc., received during fiscal year 1916.....	10,671
Letters, etc., sent during the fiscal year 1916.....	13,781
Officers' money accounts:	
On hand July 1, 1915.....	212
Received during the fiscal year 1916.....	2,984
Examined and sent to the Auditor for the War Department during the fiscal year 1916.....	3,045
On hand at the close of the fiscal year 1916.....	151
Certificates of deposit received.....	4,278

Beneficiaries.—During the period July 1, 1915, to June 30, 1916, payments were made under authority of the act of Congress approved May 11, 1908, as amended by act approved March 3, 1909, to the beneficiaries of 31 officers of the Regular Army \$50,205; for 321 enlisted men of the Regular Army, \$49,112.60, and 11 enlisted men of the Philippine Scouts, \$603, making the total paid on account of enlisted men \$49,715.60, and a grand total disbursement on this account of \$99,920.60.

Mileage.—For mileage disbursements for the fiscal year ended June 30, 1916, see Exhibit No. 7.

Letters, etc., received during fiscal year 1916.....	15,272
Letters, etc., sent during fiscal year 1916.....	23,458

Property accounts.—Beginning with the fiscal year 1916 the rendition of annual returns of quartermaster property in the hands of the Organized Militia was discontinued and the system of property accounts provided in Circular No. 38, office Chief of the Quartermaster Corps, 1913, for use in the Quartermaster Corps, was adopted to account for this property.

The number of vouchers to property accounts handled during the fiscal year ended June 30, 1916, is as follows:

On hand July 1, 1915.....	9,295
Received during the fiscal year.....	284,245
Posted to property accounts.....	279,323
On hand June 30, 1916, to be posted.....	14,217
Letters, etc., received during the fiscal year 1915.....	6,500
Letters, etc., sent during the fiscal year 1916.....	7,332

Deposits and allotments.—Report of soldiers' deposits received and repaid during the fiscal year ended June 30, 1916:

	Number.	Amount.	Interest.
Deposits received.....	69,514	\$1,557,544.92	.....
Deposits repaid by quartermasters.....	44,308	1,143,614.77	\$40,577.63
Deposits repaid by Treasury settlement.....	.....	16,036.36	579.12
Total.....	.....	1,159,651.13	41,156.75

Amount remaining to credit of depositors June 30, 1916, \$2,719,549.91.

During the period July 1, 1915, to June 30, 1916, there was disbursed \$973,770.47 in payment of allotments made by enlisted men of the Army.

Total number of allotments in force on June 30, 1916..... 8, 138
 Letters, etc., received during fiscal year 1916..... 33, 379
 Letters, etc., sent during fiscal year 1916..... 16, 481

Subsistence returns.—The number of subsistence returns handled during the fiscal year ended June 30, 1916, is as follows:

On hand June 30, 1915..... 80
 Received during the fiscal year..... 1, 924
 Examined during the fiscal year..... 1, 894
 On hand June 30, 1916..... 110
 Letters, etc., received during fiscal year 1916..... 1, 349
 Letters, etc., sent during fiscal year 1916..... 2, 323

Contracts.—There have been received, indexed, examined, and corrected when necessary and entered on record of contracts during the fiscal year ended June 30, 1916, contracts, leases, etc., as indicated below:

Contracts with bonds..... 1, 558
 Contracts without bonds..... 1, 777
 Leases..... 1, 143
 Supplemental contracts..... 189
 Annual bonds..... 21
 Notices of increase, decrease, termination of contracts..... 589
 Letters, etc., received during the fiscal year..... 15, 990
 Letters, etc., sent during the fiscal year..... 2, 395

SUPPLIES.

Statement of issues made during the fiscal year 1916.

Garrison, travel, reserve, trail, and field rations (36,487,325); average cost, 28.0124 cents..... \$10, 220, 989. 99
 Filipino ration (2,058,132); average cost, 17.4048 cents..... 358, 213. 85

Number, value, and average cost of rations, by geographical divisions, etc., issued during the fiscal year 1916.

Divisions.	Number of rations.	Value.	Average cost (cents).
United States (includes Canal Zone).....	28, 606, 521	\$8, 009, 825. 88	28. 00
Alaska.....	215, 024	76, 162. 90	35. 42
Hawaii.....	3, 248, 927	890, 931. 44	27. 41
Philippines (American).....	4, 416, 863	1, 244, 059. 77	28. 16
Total average cost:			
American.....	36, 487, 325	10, 220, 989. 99	28. 0124
Philippines (native).....	2, 058, 132	358, 213. 85	17. 4048
Canal Zone.....	2, 334, 048	782, 548. 77	33. 52

MILITIA.

June 21 to 26, inclusive, 5 days.....	106, 000	\$367, 500. 00	¹ 75. 00
June 26 to 30, inclusive, 5 days.....	106, 000	159, 000. 00	¹ 30. 00
Total for militia, June 21 to 30, inclusive.....	106, 000	556, 500. 00	¹ 52. 50

¹ Per day.

Average cost of the ration, with and without transportation.—The average cost of the actual food included in the garrison ration (American) during the fiscal year 1916 was as follows:

At all posts or stations in the United States (including Alaska and Hawaii)..... Cents. 27. 9912
 At all posts or stations in the Philippines..... 28. 1664
 At all posts or stations in the United States and Philippines..... 28. 0124

The cost of transportation charged on subsistence supplies was \$364,143.74. Charging this amount to the total cost of the garrison ration issued, it gives for the fiscal year 1916 an increased cost for each ration of 0.998 cents, thus making the cost of the garrison ration delivered, including food and transportation, as follows:

	Cents.
At all posts or stations in the United States.....	28. 9892
At all posts or stations in the Philippines.....	29. 1644
At all posts or stations in the United States and Philippines.....	29. 0104

Yearly and per diem cost of subsistence per man in the United States and the Philippines.

	Number of rations.	Daily average number of men.	Net cost.	Average cost per year.	Average cost per diem (cents).
Cost in United States.....	32, 070, 472	87, 884	\$8, 976, 920. 22	\$102. 17	27. 99
Cost in Philippines.....	6, 474, 985	17, 739	1, 602, 283. 62	90. 33	24. 74

Emergency ration.—Some difficulty has been experienced with the emergency ration and its final adoption, owing to a slight odor and rancidity which was noted after it had been packed for several months. This defect has been traced and overcome, and 20,000 of these emergency rations have been procured in order to give an elaborate try-out under differing conditions and in various sections, especially on the Mexican border and in the Philippines, where conditions should be the most trying, and if entirely satisfactory, a large quantity will be procured and kept as a reserve to meet possible needs.

The ration as devised by the food experts of the Department of Agriculture, working in conjunction with medical officers and quartermasters of the Army, is composed of the following: Raw and ground lean beef, 96 parts; flour, 96 parts; skim-milk powder, 64 parts; invert sugar, 3 parts. Salt to taste.

The nutritive qualities of the ration have been tested fully by the experts and pronounced satisfactory, and it only remains to test the keeping qualities, which may be determined only by long periods of storage under various conditions of climate and temperature.

Restoration of certain articles to subsistence list.—In the act making appropriations for the support of the Army for the fiscal year 1913, certain articles from the appropriation "Subsistence of the Army" were transferred to the appropriations "Regular supplies," "Incidental expenses," and "Clothing, and camp and garrison equipage." The act making appropriations for support of the Army for the fiscal year 1916 authorized the disbursement of the appropriations named above, including "Subsistence of the Army," as one fund to be known as "Supplies, services, and transportation." In view of this it was deemed advisable in order to facilitate supply, and in order to avoid complaints as to deliveries and keeping the stock of the articles at posts up to the required quantities, to obtain authority to direct the purchase of the articles listed below with purchases of subsistence stores and supplies for posts on monthly and quarterly requisitions, as outlined in Circular 15, O. Q. M. G., July 6, 1916:

Basins, hand.	Handkerchiefs, linen.	Shoestrings, linen, olive
Bluing, ball.	Matches, safety.	drab, short.
Bluing, powdered.	Metal polish, paste.	Soap, issue.
Borax.	Metal polish, powder.	Soap, hand.
Brooms, whisk.	Mugs, shaving, enameled.	Soap, laundry.
Brushes, hair.	Needles.	Soap, scouring.
Brushes, shaving.	Polish, shoe, black, combination.	Soap, shaving.
Brushes, shoe.	Polish, shoe, russet, combination.	Soap, toilet.
Brushes, tooth.	Polish, shoe, russet, paste.	Starch, laundry.
Buttons, composition, large and small.	Razors.	Thread, cotton, black.
Buttons, collar.	Razor strops.	Thread, cotton, O. D.
Candles.	Salt, rock.	Thread, cotton, white.
Candles, lantern.	Shoestrings, linen, black, long.	Thread, linen, black.
Combs, medium.	Shoestrings, linen, black, short.	Thread, linen, white.
Combs, pocket.	Shoestrings, linen, olive drab, long.	Thread, silk, black.
Electrosilicon.		Towels, bath.
Equipment, dressing, olive drab.		Towels, huckaback.
Equipment, dressing, white.		Toweling.

Rolling kitchens.—Quite a number of experiments or tests of various types of rolling kitchens, from both domestic and foreign sources, have been made during the year, and some under severe service conditions in Mexico and on the border. It is believed that a satisfactory type of American design has been found, and over 25 of the most promising designs have been procured and shipped to the Southern Department for a most elaborate field-service test. A special test is also being conducted at Fort Sam Houston, Tex., of certain models, under the direction of the department authorities of the Southern Department.

Among those tried out were several which developed the fact that they simply added to the amount of transportation that had to be maintained for an army in the field, and did not produce satisfactory results in the way of hot food for men on the march and on the firing line.

So far as information is obtainable or judgment can be depended upon, it is believed that the type that is finally adopted after additional and elaborate tests have been made will compare most favorably with the best designs of rolling kitchens in European armies.

Manual for Army bakers and Army cooks.—It was deemed advisable to have the Manual for Army Bakers and the Manual for Army Cooks revised and brought up to date. It was also desired when such revision was made to have these two manuals, which are so closely related and both of which are ordinarily used by instructors and students at the bakers' and cooks' school, combined into one volume, but divided into two parts. Such consolidation would reduce the expense of printing, eliminate the necessity for carrying so many publications for distribution, and enable the volume to be more readily carried or handled.

Capt. E. S. Wheeler, Fourth Field Artillery, who was well qualified to do the work, was selected and began the revision. He made considerable progress, but his tour of duty in the Quartermaster Corps expired before he could complete the work, and did not, in consequence, conclude it. In view of this, Capt. Leonard L. Deitrick, Seventh Cavalry, who was also well prepared to continue and complete the volume was selected for this duty and now has the

work well on toward completion, and it is hoped to have it shortly ready for issue.

Mobilization of the National Guard.—On May 1, 1916, the National Guard of Texas, Arizona, and New Mexico was called into active service by order of the President, and on June 18, 1916, the remainder of the National Guard of the United States was called into active service by the President. It became necessary, therefore, to at once provide for their subsistence. Under law and regulations, when called into active service they are to be subsisted at the expense of the Government from the time of their arrival at company rendezvous. The subsistence of the National Guard is supervised and provided for by the military authorities of the State at company rendezvous, and also at State mobilization camps until sworn into the service, when they come under the supervision and control of the Federal authorities and are subsisted as are other troops of the Regular Army.

When the National Guard troops were transported from State mobilization camps to the Southern Department, or Texas border, kitchen cars were provided in which to prepare their food, or a baggage or box car was furnished, with a range installed by which the food could be prepared. When they were ready to be transported, 10 days' rations were furnished to make the journey to destination in the South and to afford them a small supply in addition, so as to provide against any delays and to care for their wants until arrangements could be made to meet their needs at destination in the regular way.

The subsistence of the troops, suddenly mobilized in camps and when transported to the Mexican border and after their arrival there, was accomplished in a satisfactory and successful manner by the department. This is borne out by the extensive inspections of the National Guard by inspectors, and in the inspection and reports of Maj. Gen. Tasker H. Bliss, who has borne testimony to the thorough and satisfactory manner in which the troops have been subsisted in Texas and on the border.

Isolated cases of inadequate subsistence have here and there been urged by some, but even if true, it is humanly impossible to overcome every objection and meet every possibility of hardship, but where any mistake or hardship has occurred it will probably be found traceable to lack of experience and judgment of the National Guard in not knowing how to care for themselves as regulars do, which is a most natural result, because of the fact that they have not had the necessary training and experience in this direction, but have done remarkably well, all things considered. Regular troops at posts, when traveling or when campaigning, have very rarely complained. This is principally due to the years of training and experience regular troops have had in caring for themselves, whereas the National Guard come from homes where they enjoy daily surroundings, comforts, and cooking accustomed to, and the change comes somewhat as a revulsion when they go from such homes and food and cooking to the camp and the food and life of the soldier. In short, most of the complaints as to the National Guard are due to or can be charged up against inexperience. Cooks who may be first-class men in a restaurant, club, or home, but without experience in the field cooking for hundreds and without the tools and equip-

ment at hand they would have at home, can not be expected to meet every demand, and is one of the reasons for failure. Another reason is the inexperience of commanding officers in not knowing how to provide for their men. One company may be living in plenty on the regular ration, while another company may be hungry because of food spoiled through lack of proper care or preparation.

The number of meat inspectors of the Army is very limited. In consequence meat inspectors from the Agricultural Department were detailed, through the courtesy of that department, to cooperate with and assist the inspectors of the Army in safeguarding its meat supply by making a careful inspection of all fresh and canned meats before issue to and consumption by the troops.

Meat for use of the Army is rigidly inspected at the packing houses, the inspection beginning with the animal before it is killed and all through the after process by inspectors of the Agricultural Department stationed at the various packing houses throughout the country. In addition to this, meat inspectors and experts of the Quartermaster Corps are also stationed at the large packing centers, like Chicago, Kansas City, Omaha, San Francisco, and elsewhere where meat is being prepared or cured for the Army, and they also watch it through the whole process from the killing of the animal until turned over to the Government. Besides all this, the inspectors of the packing houses also closely inspect all meats.

In addition to the above safeguards, meat inspectors from the Agricultural Department have, with the cordial cooperation of that department, been ordered stationed at all places where large bodies of troops are located to inspect all meats before use by the troops.

With regard to other food articles or stores purchased for the Army, trained experts at depots and purchasing stations carefully inspect all supplies purchased, and at stations where troops are actually located, inspections are made by the officers who procure the supplies, who are assisted by trained inspectors if they are available.

The pure food and drugs act of 1906, and amendments since, as to the sale, etc., of poisoned or deleterious food, and also the meat-inspection law of 1906, and amendments since, against the use of meat that is "unsound, unhealthful, unwholesome, or otherwise unfit for human food," helps greatly to safeguard the food supply.

The health, contentment, and efficiency of troops are the first care of a commander. To make proper provision regarding the soldier demands the best thought and effort of his superiors at all times. The subsistence of the soldier is of vital importance, and it is admitted that the ration of the American soldier is the most liberal of that of any army in the world, and, as stated, proper subsistence or cooking of their food is of the greatest importance, for it is folly to train soldiers to the highest state of efficiency and then by lack of care or attention to their food for a short season prepare the way to put them out of condition at the most critical moment.

The Army has also the latest designs and devices for cooking food in the field and baking bread. The field bakery will compare most favorably with the very best types of this kind in any of the European armies of to-day, and the bread produced is uniformly excellent. There are, too, trained cooks and bakers who prepare the food and bake the bread for the Army. These trained experts are

taught in the various bakers' and cooks' schools that are established at designated places in the United States, in the Hawaiian Territory, in the Philippines, and it is hoped shortly to establish a school in Panama.

To meet any possible exigency that might arise, it has been necessary to procure and place in stock at the depots at El Paso, Fort Sam Houston, Harlingen, Columbus, Nogales, etc., large quantities of articles of the ration and other subsistence supplies for troops on the border and in the Southern Department. The corps has been able to practically meet every demand made upon it, so far as the food supply of the Army is concerned.

Some complaints have reached this office as to the poor quality and insufficiency of the food furnished various militia organizations. After investigation of these cases, the records indicate that practically all the complaints so far as have been investigated have been unfounded, or due to the inexperience of cooks of the National Guard or lack of experience and training of the National Guard in taking care of themselves, though, as previously stated, they have done remarkably well in this respect. The following indicates the character of the complaints and some of the replies thereto:

Hon. Hoke Smith, United States Senate; Hon. Carl Vinson, House of Representatives; and Mr. C. T. Wiebis, reported to this office that there was a shortage of food, etc., also that the food was not of good quality at the Georgia mobilization camp at Macon, Ga. The complaints were immediately referred for investigation, and the reports of the senior mustering officer at the camp at Macon, Ga., indicated that at no time were the rations inadequate, but that they were ample and of excellent quality. Later on Senator Smith submitted a communication from the Hon. Hooper Alexander, United States attorney for the northern district of Georgia, who stated that he had visited Camp Harris and found the troops in fine spirits and prospering in every way. Mr. Alexander's letter is as follows:

AUGUST 7, 1916.

HON. HOKE SMITH,
United States Senate, Washington, D. C.

MY DEAR SENATOR: I see by the papers that the customary crop of critics is complaining at the administration of the War Department and its treatment of the militia.

It has occurred to me that the Secretary of War may be interested to know that the Georgia troops are in fine spirits and prospering in every way. I went to Camp Harris a few days ago after they were concentrated there and personally inspected the cooking arrangements and other camp facilities and I was delighted with the situation.

I have a boy 19 years old, who enlisted with the Fifth Georgia Regiment and is now in camp. He came here last night on a 36-hour furlough. He has gained 14 pounds while in camp, and reports to me that everything there, especially the food, is as nearly perfect as could be asked. He seems delighted with the situation, and says that practically every man with the Georgia Brigade feels the same way about it. There are a few critics there as you will find them everywhere, but I am sure that there is no ground for criticising the War Department, at least so far as concerns the Georgia troops.

I am writing this because it may be of interest to the Secretary of War, if you should see fit to communicate it to him.

Respectfully,

HOOPER ALEXANDER.

This communication was entirely voluntary and unsolicited, and Senator Smith, who had previously deplored the alleged poor food and conditions, stated that he was very much gratified to receive this

letter and to submit it to the Secretary of War, as he had very much confidence in the statements of Mr. Alexander.

Mr. Frank G. Gorrell, secretary of the National Canners Association, forwarded a clipping to this office from the New York World relative to the poisoning of the Massachusetts Militia by canned salmon. A thorough investigation of this case disclosed the fact that several cans of this salmon were brought by the Massachusetts Militia with them from their mobilization camp at Framingham, Mass. Through the carelessness of the cook a "swelled" can was mixed with other cans containing good food furnished by the Army authorities, and the mixing of the bad with the good food was the cause of the illness of the troops. The illness was the direct result of lack of judgment and experience of militia cooks. Steps were immediately taken by the authorities to prevent a recurrence of cases of this character, and orders were issued from this office looking to the prevention of similar cases.

Mr. G. W. Pratt submitted a clipping from Mr. McCann regarding the bad food furnished the militia on the border, particularly the New York troops. A thorough investigation of this matter was made, and the commanding general of the New York Division reported that the complaint was entirely without foundation and attached complete statements of company commander, mess sergeant, first sergeant, and cook of Company H, Seventh New York Infantry (where it was alleged the bad food had been served), indicating that the food furnished was of the best quality and that the complaints were entirely unfounded.

But one case reached this office and was investigated, wherein the complaint of lack of food was well founded. This occurred in complaint of the Hon. H. P. Snyder, House of Representatives, who reported to this office that a member of Troop G, First New York Cavalry, on his way to the border by train, had been without food for 24 hours. On investigation it was ascertained that the officer in charge failed to provide for subsistence at the time. This failure was due to lack of experience and poor judgment on the part of the officer, for he should have met the emergency promptly by procuring the necessary food if his rations were exhausted, at any eating station, and made a charge against the Government the same as he would or should have done if his men had been delayed and the ration supplies were all consumed before reaching his destination, as is frequently the case with the Regular Army. So that while the incident is greatly regretted, it seems to have been due to the fact that the militia officer in charge was lacking in experience and initiative in caring for his men.

But, as previously stated, it is humanly impossible to provide against every contingency, mistake, or even hardship in a great movement of this character.

In conclusion it may be well to repeat that Maj. Gen. Tasker H. Bliss, United States Army, Assistant Chief of Staff, made an extensive investigation of practically all the militia organizations encamped on the Mexican border, and reported that the rations were ample and of excellent quality, and that a general spirit of contentment prevailed among the troops.

Value of miscellaneous supplies issued to the militia, fiscal year 1916, \$38,446.65.

Losses.—The following losses occurred during the year, and are based on the losses for nine months, which is the latest data available:

Ordinary wastage.....	\$21,109.92
Deterioration.....	166,701.34
Loss in transit.....	2,001.80
Loss—carriers and sellers responsible.....	4,747.60
Theft or fire.....	549.95
Miscellaneous.....	34,034.28
Losses on account of Galveston hurricane.....	10,751.90
Issued to replace losses to troops on account of Galveston hurricane.....	11,769.86

Total.....	251,666.65
Deduct gains.....	\$23,226.68
Deduct sales at auction.....	32,750.36
Deduct reclamation made on carriers and sellers.....	4,747.60

Total.....	60,724.64
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Total net losses.....	190,942.01
Issues to destitutes on account of hurricane, etc.....	3,041.04

The excessive losses are due to the sale of surplus stock of the Corregidor Reserve and to the Galveston hurricane.

CLOTHING AND EQUIPAGE.

FINANCE.

Appropriation by Congress for the purchase and manufacture of clothing and equipage for the fiscal year ending June 30, 1916:

Original amount.....	\$6,693,000.00
Deficiency.....	5,014,702.00
Total.....	11,707,702.00
Credit on account of sales to officers, etc.....	220,000.00

Collections and disbursements in connection with the settlement of the clothing accounts of the enlisted men of the Army.—The following are the collections from and disbursements to the enlisted men of the Army in the settlement of their clothing accounts during the period specified, viz:

Collections on account of clothing drawn in excess of established allowances:

Appropriation, 1915—	
From Apr. 1, 1915, to June 30, 1915.....	\$13,107.63
From July 1, 1915, to Mar. 31, 1916.....	76,349.91
Appropriation, 1916, from July 1, 1915, to Mar. 31, 1916.....	98,783.52
Total collections.....	188,241.06

Payments to enlisted men at time of discharge from service on account of clothing undrawn:

Appropriation, 1915—	
From Apr. 1, 1915, to June 30, 1915.....	304,432.58
From July 1, 1915, to Mar. 31, 1916.....	457,705.37
Total disbursements.....	762,137.95

From the above it will readily be seen that the allowance of clothing established to properly clothe the enlisted men of the Army under all service conditions is ample.

Issues to the militia.—There were issued to the governors of the several States and Territories and to the commanding general of the District of Columbia Militia, for use of the Organized Militia during the fiscal year ending June 30, 1916, clothing and equipage supplies to the total value of \$1,098,813.15, of which \$931,104.08 was on account of issues under the act of May 27, 1908, and \$167,709.07 under the act of June 22, 1906, amending section 1661, Revised Statutes.

The issues of these supplies were made upon requisitions submitted by the governors of the respective States and Territories and the commanding general District of Columbia Militia, duly approved by the Secretary of War. Reimbursements for the value of the property issued have been and will, as soon as the receipts for the same shall have been received by the officer making the issues, be submitted to the Militia Bureau for transmission to the Auditor for the War Department, in order that the appropriation "Clothing, and camp and garrison equipage" may receive proper credit.

Sales to the militia.—The amount of money realized during the fiscal year ending June 30, 1916, from sales of clothing and equipage supplies to the governors of the States and Territories, and the commanding general District of Columbia Militia, under the act of Congress approved January 21, 1903, amounted to \$70,352.85, which sum has been placed to the credit of the appropriation "Clothing, and camp and garrison equipage."

Sales of clothing and equipage to various departments and bureaus of the Government.—By special authority of the Secretary of War, under the provisions of paragraph 671, Army Regulations, 1913, there were sold during the fiscal year ending June 30, 1916, to various departments and bureaus of the Government, clothing and equipage supplies to the value of \$87,301.09. The amounts have been or will be credited to the appropriation "Clothing, and camp and garrison equipage."

Sales of clothing and equipage supplies to military schools and colleges.—There were sold during the fiscal year ending June 30, 1916, under the provisions of the act approved July 17, 1914, to military schools and colleges at which officers of the Army are detailed as professors of military science and tactics, clothing and equipage supplies to the value of \$9,363.75. The amounts have been placed to the credit of the appropriation "Clothing, and camp and garrison equipage."

Sales at auction.—There was realized at the general depots of the Quartermaster Corps during the past fiscal year from sales of condemned and unserviceable articles of clothing and equipage and cuttings the total sum of \$27,532.53. The expenses connected with making these sales amounted to \$192.04, which were deducted from the amount realized, leaving a balance of \$27,340.49, which, under the law, was covered into the Treasury of the United States, credited to "Miscellaneous receipts."

Field supply depots.—For statement of quantities of clothing and equipage which, by direction of the Secretary of War, as stated in communication from the office of The Adjutant General, of February 23, 1911, are to be kept available in field supply depot No. 1, also the quantities on hand June 30, 1916, see Exhibit No. 12. It will be seen that most of the supplies have during the recent mobilization of the National Guard been drawn upon and that the articles constituting

the reserve supply have virtually become exhausted and no great dependence can be placed upon the same.

Clothing and equipage supplies for the National Guard called out by the President of the United States.—The Secretary of War on June 18, 1916, under instructions from the President, called upon each of the governors of the States (except the governors of Texas, New Mexico, and Arizona, the militia of which States were called into service upon a previous call), by telegraph, and directed the assembling at the respective State mobilization points, or at such points as might be designated by the commanding generals of the respective military departments, of such organizations as were deemed necessary.

Realizing that immediate steps should be taken to promptly and efficiently furnish the troops thus called into service with the necessary clothing and equipage supplies for field service, at war strength, all the supplies available, together with such as under special authority of the Secretary of War were purchased at the general depots, either in open market or after inviting proposals upon short notice, were placed under the control of the several department commanders. The States in the Western Department to be supplied from the depot at San Francisco, Cal., those in the Central and Southern Departments from the depot at St. Louis, Mo., and the States located in the east from the depot at Philadelphia, Pa.

The action in making these purchases was due solely to the fact that the stock of clothing and equipage held in reserve proved to be inadequate to meet the pressing demands so suddenly made upon the corps, the limited appropriations by Congress heretofore made for the procurement of a reserve supply not having been sufficient.

The following is a statement showing the amounts estimated by the clothing supply branch as being required for reserve supplies of clothing and equipage for the fiscal years 1909 to 1916, inclusive, the amounts included in the annual estimates, and the amounts appropriated by Congress for the purpose:

Fiscal year.	Amount estimated by clothing supply branch.	Amount included in estimate.	Amount appropriated by Congress.
1909.....	\$2,500,000.00	\$2,500,000.00	\$1,274,873.86
1910.....	1,549,615.61	1,549,615.61	1,549,615.61
1911.....	1,494,653.64	494,653.64	494,653.64
1912.....	332,041.76	332,041.76	332,041.76
1913.....	2,051,889.34	131,700.00	.....
1914.....	1,596,893.79	596,893.79	244,958.79
1915.....	2,906,064.45	225,389.95	225,389.95
1916.....	225,000.00	200,000.00	.....
Total.....	12,656,158.59	6,030,294.75	4,121,533.61

The stock on hand at the general depots had been further reduced by issues to equip the training camps, no funds having heretofore been appropriated to cover cost of such supplies.

Purchase of clothing for special issue to troops in Alaska.—Under existing orders the troops stationed in Alaska perform duties which require that they should be supplied clothing of a specially warm character. The following is a statement of the articles procured during the past fiscal year, amounting in the aggregate to \$8,758.46:

Articles.	Quantity.	Cost.	Articles.	Quantity.	Cost.
Boots, rubber shoe, pair.....	21	\$14. 00	Puttees, duck.....	21	\$14. 00
Caps, fur.....	21	\$1. 00	Puttees, rubber.....	21	\$1. 00
Drawers, wool, knit, pair.....	721	\$14. 00	Shirts, flannel, pair.....	21	\$1. 00
Gloves, barmitz, pair.....	21	\$1. 00	Shirts, duck, pair.....	41	\$1. 00
Gloves, barmitz, pair.....	21	\$1. 00	Shirts.....	21	\$1. 00
Gloves, Scotch, wool, pair.....	21	\$1. 00	Shirts, duck, Scotch, pair.....	21	\$1. 00
Hats, fur, winter.....	71	\$1. 00	Shirts.....	21	\$1. 00
Knives, fold, pair.....	721	\$1. 00	Shirts, duck, pair.....	21	\$1. 00
Mittens, Scotch, pair.....	21	\$1. 00	Shirts, duck, pair.....	21	\$1. 00
Stockings, winter, hosiery, pair.....	21	\$1. 00	Shirts, duck, pair.....	21	\$1. 00
Stockings, winter, hosiery, pair.....	21	\$1. 00	Shirts, duck, pair.....	21	\$1. 00
			Total.....		\$ 74. 00

Trial of clothing manufactured from wool and cotton mixed service uniform.—Reports upon the cotton and wool mixed service uniform for trial by troops stationed at Fort Myer, Va., received in the annual report for the fiscal year ending June 30, 1917, have been received. The tender of these reports was favorable and the results conclusive, as the clothing has not been subjected to wear under field-service conditions. Judging from reports received from olive-drab shirts, which are now exclusively manufactured from flannel composed of 75 per cent wool and 25 per cent cotton, it is no doubt that the olive-drab service clothing will prove to be acceptable and serviceable.

Scarcity of dyes.—As stated in the last annual report, great difficulties were experienced by manufacturers in obtaining the dyes needed to produce the fast colors and shades of the various woolen and cotton fabrics entering into the manufacture of uniforms for the Army.

On account of the European war and consequent impossibility of importing the dyes which have heretofore been produced from abroad, the situation became quite serious.

In connection with the purchase of the clothing materials required by the Quartermaster Corps, especially since January last, manufacturers represented that it would be impracticable to obtain the needed dyes, which had entirely disappeared from the American market.

Contractors have, however, been able to produce the fabrics and the situation seems to have been somewhat relieved by the ability of American manufacturers to produce suitable dyestuffs in the United States.

The department no longer insists upon an olive-drab color for stockings, it having been decided to purchase only the commercial article, thereby giving relief to manufacturers of textile fabrics.

Brown mixed woolens.—In view of the scarcity of dyestuffs referred to, this office realized that timely steps should be taken to produce a fabric that would prove satisfactory as a service uniform and at the same time eliminate the uncertainty of depending upon dyes of foreign production, and samples of brown and gray mixed meltons were procured from various woolen mills, and it was demonstrated that, should occasion arise, there will be no difficulty in obtaining woolen cloth in sufficient quantities.

Revision of specifications for woolen fabrics.—It having been found advisable to change the standards and specifications for woolen fabrics entering into the manufacture of uniforms, the specifications governing the purchase of such materials have been revised by elim-

inating the 14 and 17 ounce olive-drab meltons and substituting therefor a 16-ounce melton for service coats and breeches.

Changes in uniform.—For the purpose of making a study of and reporting upon the question of the uniform and clothing allowances of enlisted men, a board of officers was appointed under the provisions of War Department Special Orders, No. 39, February 16, 1916, as amended by Special Orders, Nos. 49 and 80, of February 29 and April 5, c. s.

It is understood that the board referred to has rendered its report and submitted the same to The Adjutant General. Up to the present time this office has not been advised of the action taken upon the recommendations of the board of officers referred to.

Previous to the appointment of the board this office, on several occasions during the past year, recommended the abolishment of the blue uniform as an economic measure and the discontinuance of the clothing money allowance, it having been found impracticable to establish an allowance that would be equitable under existing service conditions.

Unauthorized wearing of uniforms.—The act of Congress approved June 3, 1916 (sec. 125), provides that it shall be unlawful for any person not an officer or enlisted man of the United States Army, Navy, or Marine Corps to wear the duly prescribed uniform of the United States Army, Navy, or Marine Corps, or any distinctive part of such uniforms, or a uniform any part of which is similar to a distinctive part of the duly prescribed uniform of the United States Army, Navy, or Marine Corps. This provision is not, however, to be construed so as to prevent officers or enlisted men of the National Guard from wearing, in pursuance of law and regulations, the uniform lawfully prescribed to be worn by such officers or enlisted men of the National Guard; members of the organization known as the Boy Scouts, or such other organizations as the Secretary of War may designate, are exempted from the provisions of this act.

Several organizations having made inquiry as to whether their status was such as to prevent them from wearing the authorized uniform of the Army, The Adjutant General, by direction of the Secretary of War, has informed the representatives of such organizations that a compliance with the following requirements, with the exception of a distinctive hat band, would meet with the approval of the War Department, viz:

Organizations must be purely military.

They must be composed of citizens of the United States, or those who have declared their intention to become citizens.

The object of the organization must be to so drill and train its members that they may be better able to take their places in the large armies that would be called in case of great national emergency.

The organization must be armed with the rifle or other arm approved by the War Department.

The drill and training must be according to the prescribed regulations and manuals of the War Department.

Some mark or insignia of a distinctive character must be adopted to be worn on the blouse or coat, or shirt when blouse or coat is not worn; also a distinctive hat-band in lieu of a cord must be worn.

Officer must not wear the insignia of rank prescribed for officers of the Army, Navy, or Marine Corps.

The insignia of rank prescribed for officers of educational institutions are recommended, with reference to which a circular now in process of publication will be issued in a few weeks and furnished to the different educational institutions and military societies.

Field shoes.—Realizing the fact that on account of the numerous complaints that the regulation shoe, while excellent in all other respects, was too light in construction and material, and consequently did not possess the necessary wearing qualities for service in the field, this office ordered the purchase and issue to troops, for preliminary trial, of 600 pairs conforming in pattern and substance, with minor modifications, to those furnished by American manufacturers to the French and Belgian Armies during the present European war. The uppers are made of undressed veal or side leather. The soles are of adequate thickness and are studded with hobnails. The shoes are made upon the same lasts as heretofore used in the manufacture of Army shoes, and in regard to which no complaints have reached this office.

There are now being purchased under contracts at the Boston, Philadelphia, and St. Louis depots 265,000 pairs, at an average cost of \$3.69 per pair, and they are dispatched to the troops as fast as accepted from the contractor.

Overhauling and repairing of worn-out shoes.—It having been demonstrated that in many cases the worn-out shoes discarded by the enlisted men could be overhauled and remodeled at a reasonable price, thus rendering them fit for further service, the question of retaining the ownership of the shoes by the Government was submitted for consideration by higher authority. The work connected with the repair of such shoes, after collecting them from the principal posts, could, it was suggested, be done either at the Disciplinary Barracks or under contract with a firm specializing in the remodeling of old shoes, which would result in a large saving to the Government in the cost of shoes.

In reply to the foregoing this office has been advised that after careful consideration it has been decided that it is to the best interest of the service to continue the clothing allowance system for enlisted men instead of the Government retaining ownership of all clothing issued to enlisted men.

Aviators' clothing.—Under the provisions of paragraph 20, Special Orders No. 274, War Department, November 24, 1915, a board of officers was appointed to meet at Fort Sam Houston, Tex., to consider the question of adopting clothing suitable for aviation purposes. This department, upon the recommendation of said board, procured from abroad, through the military attaché at London, England, articles of equipment suitable for the purpose.

Upon receipt of these samples they were forwarded to the board of officers referred to for consideration. No definite result has, however, as yet been communicated to this office.

On the 27th of May last the Chief Signal Officer requested a decision as to whether aviators' clothing should be paid for from appropriations of the Signal Corps or from those for the Quartermaster Corps.

Under date of June 7, 1916, the Secretary of War approved the recommendation of this office that the clothing required by officers should be paid for by the officers themselves, and that such as may be required by the enlisted men be furnished by the Quartermaster Corps and issued on memorandum receipt.

Issue of civilian clothing to prisoners upon release from confinement.—Under the provisions of paragraph 1170, Army Regulations as

changed by C. A. R. No. 27, 1915, each general prisoner upon release from confinement is furnished by the Quartermaster Corps with a suit of citizens' outer clothing at a cost of not to exceed \$10.

Experiments conducted at the United States Disciplinary Barracks, Fort Leavenworth, Kans., demonstrated that the clothing required for issue to discharged prisoners could be economically manufactured by prison labor and the savings would cover the cost also of an overcoat.

Steps were taken during the past year to install a tailor shop at the Pacific Branch, United States Disciplinary Barracks, Alcatraz Island, Cal., and the Atlantic Branch, Fort Jay, N. Y. A shoe-repair shop has also been established at these barracks.

These added facilities will not only enable the Quartermaster Corps to manufacture the several suits required for issue to discharged prisoners, but will provide the means by which garments can be renovated and repaired for issue to general prisoners in confinement. Experience has shown that obsolete shoes and other articles can be altered and utilized in this manner with considerable economy to the Government.

Leather leggings.—A supply of leather leggings has been procured and issued to the mounted organizations for whom they are intended. From reports received it appears that they do not meet with favor, partly due to unsuitable material of which made. No action to discontinue their procurement and issue has thus far been taken, as the department considers that a further and more extensive trial will be necessary to arrive at a thorough and correct understanding.

Suggestions have been made that in case it should be decided to abolish the leather leggings it would be preferable to adopt for the mounted troops a suitable legging made of canvas and to reinforce them with leather.

Canvas leggings.—Reports have been received that the present canvas legging is not suitable for the requirements of the service. It is pointed out that a return to the pattern issued prior to the Spanish-American War would be preferable. The pattern referred to was provided with a leather strap to go beneath the shank of the shoe, thereby keeping the legging in proper place and extending the material sufficiently over the instep to prevent sand and other substances from entering the shoe.

Ponchos and slickers.—Experiments have continued during the past year in the effort to develop a satisfactory poncho and slicker for the service, it being found that the waterproof sheeting heretofore used in manufacturing these articles was not suitable for the purpose.

As to slickers, so far experiments have shown that a double texture material with a rubber interlining has given the most satisfaction.

Recently a fabric known as "aeroplane cloth" was brought to the attention of this office, and preliminary experiments and tests indicated that this fabric would prove especially serviceable for ponchos. Contracts have been awarded for a quantity of this material, and it will be given a thorough trial.

In general it can be stated that complaints with reference to ponchos and slickers have been less frequent during the past year, and it is hoped that within the near future a perfectly satisfactory article will be evolved.

Changes in specifications for clothing and equipage.—The following is a statement of the various changes that were made in the specifications for clothing, equipage, and materials during the fiscal year ending June 30, 1916, with the reasons therefor:

No.	Articles.	Reasons for change.
1231	Collar ornaments.....	Adoption of ornaments for Disciplinary Guards.
1232	Cap ornaments.....	Adoption of ornaments for Disciplinary Guards.
1233	Leather leggings.....	Adoption of, for mounted organizations.
1234	Ambulance guidon staffs.....	Readopted for ambulances.
1235	Tent poles and pins.....	New hexagonal pole for pyramidal tents in lieu of old pole and tripod; new specifications for ward tents and consolidation of specifications for poles and pins.
1236	Tentage.....	Adoption of wall tent, large (formerly hospital, regulation); adoption of ward tent; wall tent, small (formerly wall tent, tropical) in lieu of pyramidal tent, small; canvas cover for folded ward tent as prescribed in G. O. 39, W. D., 1915; and consolidation of all tentage specifications.
1238	Silken colors, guidons, and standards ..	Adoption of guidons for ambulance companies, field hospital companies, aero squadron, and telegraph companies, Signal Corps.
1239	Field desks for companies and regimental headquarters.	New filing arrangement.
1240	Woolens.....	Provide for mixture of cotton in 30-ounce melton and shirting flannel; substitution of 16-ounce for 14 and 17 ounce meltons.
1241	Bunting flags, colors, standards, pennants, and guidons.	Adoption of guidons for ambulance and field hospital companies, aero squadron, and telegraph companies, Signal Corps.
1242	Containers for identification certificates	New.

Guidons for machine-gun troops.—Requisitions for guidons for machine-gun troops having been made upon this department, The Adjutant General, by order of the Secretary of War, has advised this office that the same are not required by such troops.

The officers in charge of the several issuing depots have been advised accordingly.

Band instruments.—The change in musical instruments furnished to the bands of the Army and the militia by the Quartermaster Corps from high to what is known as the low or international pitch has received the constant attention of this office in so far as the appropriations available for that purpose would permit. About one-third of the bands have been supplied with new instruments, or, whenever practicable, alterations in the instruments on hand by means of slides have been made, thereby perfecting the changes in the most economical manner.

Mosquito bars for troops in Canal Zone.—The attention of this office having been called to the necessity of supplying the troops stationed in the Canal Zone with mosquito bars of a finer mesh, in view of the fact that those of regulation pattern did not afford sufficient protection against the sand flies so prevalent in that part of the country, the Department Quartermaster of the Eastern Department on June 28 last was authorized to purchase the necessary bars, to be of a quality that may be found most suitable and satisfactory.

A report has been received from the officer referred to, from which it appears that 5,610 bars have been purchased at the several posts requiring them, at a total cost of \$10,889.68.

Claims, act of March 3, 1885.—There were received at this office during the fiscal year ending June 30, 1916, 144 claims for personal property destroyed or lost by officers and enlisted men while in the service of the United States. The act of Congress approved

March 3, 1885, authorizes settlement of claims of this character by proper accounting officers of the Treasury Department.

The act contains a provision that the liability of the Government shall be limited to such articles as the Secretary of War, in his discretion, shall decide to be reasonable, useful, necessary and proper for such officer or soldier to have in his possession while in quarters, engaged in the public service, or in the line of duty.

The claims received were carefully considered in this office and submitted to the Secretary of War for transmittal to the Auditor for the War Department, the total amount recommended for settlement amounting to \$1,713.23.

Claims on account of the Texas flood.—A severe tropical storm or hurricane reached the coast of Texas at Galveston on August 16, 1915. The storm was of exceptional violence and duration, and the wind and the rain and the floods from the great tide and backwaters caused enormous damage at the Army posts, camps, and stations at and near Galveston and Texas City.

In view of the extraordinary situation the Secretary of War approved recommendations for application to Congress for special legislation for the relief of those connected with the Army who suffered loss of private property in the storm, including civilian employees, and also to provide reimbursement for loss of articles personal to the use of members of families and dependents of officers, enlisted men, and civilian employees and for military organizations.

Up to June 30, 1916, there have been received applications from 8,321 claimants for amounts aggregating over \$655,000. As revised by several boards of officers, where there has been such review of the claims submitted, the amount involved is reduced to \$515,449.20.

Of this latter amount \$414,306.29 is for articles that were personal to the use of officers and enlisted men; \$55,841.79 for articles used by civilian employees connected with the Army and members of families and dependents of officers, enlisted men, and civilian employees; and \$45,301.17 for reimbursement of articles lost by military organizations.

The matter was reported to Congress by letters addressed by the Secretary of War to the Speaker of the House of Representatives under dates of October 30, 1915, and January 11, 1916. These communications, with inclosures, were published in Document No. 582, House of Representatives, Sixty-fourth Congress, first session.

The examination of these claims is proceeding, but their transmittal to the Auditor for the War Department must of necessity be deferred until Congress shall have had opportunity to consider the special legislation recommended by the Secretary of War.

The claims can not be adjudicated under the act of Congress approved March 3, 1885.

Clothing damaged by Galveston, Tex., flood.—The large quantities of overcoats, blankets, sweaters, and other articles of clothing damaged by salt water incident to the hurricane and flood at Galveston, Tex., in August last, which it was believed could be renovated and rendered serviceable for issue, were ordered to the depot at Philadelphia, Pa., for that purpose. The expenditure connected with such renovation is reported to have amounted to \$12,606.97.

Many of the articles were discolored with a brown color which it was found impossible to remove, but the discoloration was not sufficiently noticeable to prevent the clothing from being issued to troops at the several disciplinary barracks, and it has therefore been set aside accordingly. The remainder of the renovated property has been placed in stock for issue.

Manufacture of mattresses for prisoners at the Atlantic United States Disciplinary Barracks.—On the 21st of March last The Adjutant General informed this office of the approval of the request of the commandant United States Disciplinary Barracks at Governors Island, New York Harbor, that the old and present policy of furnishing the prisoners with straw mattresses with no pillows or sheets be discontinued, and that they be supplied with cotton mattresses, pillows, etc.

A requisition for the required articles having been submitted, and it having been decided to make the mattresses at the United States Disciplinary Barracks at Fort Leavenworth, Kans., thus giving employment to prisoners, an order to manufacture the number needed (400) was given after ascertaining that the necessary picking and filler machine and materials could be procured as cheaply at Fort Leavenworth as elsewhere. Purchase has been authorized at a cost of \$1,404.25.

Relief of sufferers from fire at Paris, Tex.—Congress, by act approved April 11, 1916, authorized the Secretary of War to supply for temporary use, under such rules and regulations as he may prescribe, a sufficient number of tents to afford shelter for the sufferers from the conflagration in Paris, Tex., and who may be in need of the same, and to furnish such cots, blankets, and supplies as, in his judgment, would be necessary to give relief to such persons as were rendered destitute by said conflagration.

The act of Congress quoted made no provision permitting the use of any public funds for the purpose referred to, and upon the receipt of information to the effect that governmental aid would not be required, no further action regarding the matter was taken by this office.

Issue of tents to flood sufferers in the Mississippi Valley.—There were issued in February last, from the St. Louis, Mo., depot, to sufferers from the overflow of the Mississippi River, 51 conical wall tents, 2 pyramidal tents, large, 5 wall tents, small, and 17 wall tents, large, all complete with poles and pins, valued at \$2,875.10. The cost of shipping the same from St. Louis to Arnaudville, La., was \$199.53, and report has been received that all this tentage would be returned to the St. Louis depot.

Loan of cots for use of the United Veterans' reunion at Birmingham, Ala.—There were loaned from the depot at Philadelphia, Pa., to the committee having charge of the United Veterans' Reunion held at Birmingham, Ala., in May last, under Senate joint resolution No. 76, by authority of the Secretary of War, for use of the veterans attending said reunion, 5,000 cots, satisfactory bond for the value of the property to insure its safe return having been given.

Loan of tents and other property to sanitary organizations of the American National Red Cross.—There were loaned for use of the

National Service School, upon receipt of satisfactory bond, the following Quartermaster Corps supplies, etc.:

260 each cots, mattresses, pillows, and mosquito bars.
 520 pillowcases.
 1,040 bed sheets.
 150 galvanized-iron buckets.
 2 field desks.
 11 hospital tents.
 65 pyramidal tents.
 41 tent flies.

all complete with tripods, poles, and pins.

The property has been returned to the custody of the department.

Purchase of supplies under annual contracts.—Under the annual contract system advertisements were issued and contracts awarded by the Quartermaster General's office, for delivery of various classes of supplies, as required during the fiscal year, at the several depots of the Quartermaster Corps. Under these advertisements 674 bids were submitted and 319 contracts awarded.

These contracts covered supplies and services of the classes indicated in the following statement, which also shows the total amount of purchases under each class, viz:

Stationery and office supplies, wrapping and toilet paper, school books, etc.....	\$178,047.70
Hardware and tools.....	223,731.12
Rope and twine.....	66,876.38
Toilet articles, soap, and cleaning materials.....	253,384.75
Paints, acids, and glass.....	71,668.17
Canvas, duck.....	10,920.71
Iron, steel, copper, etc.....	5,530.23
Leather and harness hardware.....	167,999.00
Band instruments and parts.....	18,565.99
Clothing, equipage, and materials.....	2,430,471.55
Manufacture of clothing.....	327,635.57
Packing and waste.....	14,304.55
Office furniture.....	23,813.57
Fire, garden, and steam hose.....	24,414.70
Tableware and kitchen utensils.....	27,934.97
Total.....	3,845,298.96

Under these annual contracts orders are placed with the contractor direct by the depot quartermaster requiring the supplies, from time to time during the fiscal year, which simplifies to a great extent the procurement of supplies.

Some difficulty was experienced in a few cases in obtaining satisfactory and prompt deliveries of certain supplies, due to the unusual market conditions existing and the shortage of materials entering into their manufacture.

CONSTRUCTION AND REPAIR.

Appropriations and expenditures.—A tabulated statement attached hereto as Exhibit No. 8 shows the appropriations and amounts available during the past fiscal year for the construction, repair, and rental of buildings, including plumbing, heating, lighting and equipment, purchase and rental of land, construction and repair of water, sewer, lighting and power systems, wharves, roads, walks, bridges, and other improvements on military reservations; also the approximate amounts apportioned from the several appropriations, the general purpose for

which appropriated, and the unappropriated balances at the close of the fiscal year.

Construction of buildings.—The buildings constructed or reconstructed for fiscal years of the fiscal year 1916, the sum of the various items of work and the appropriations to which the work has been charged, with the exception of work in the Philippine Islands, are set forth in the general construction statement forming part of the report and attached Exhibit No. 3).

The more important projects authorized from July 1 to the close of the fiscal year were:

The construction of an annex to hospital 1, including water supply, sewerage and drainage, and the erection and furnishing of buildings at Fort Sill, Okla.

The construction of one head officer's quarters, two double noncommissioned officers' quarters, two bachelor officers' quarters, and administration building at Fort De Russy, Hawaii.

Two double set noncommissioned officers' quarters at Fort Sill, Okla.

The remodeling of four main entrance vestibules at Fort Sill, Okla., two double noncommissioned officers' quarters, two double bachelor officers' quarters, and administration building at Fort Sill, Okla.

Erection of main entrance vestibule and administration building at Fort Sill, Okla., two double noncommissioned officers' quarters, two double bachelor officers' quarters, and administration building at Fort Sill, Okla., and miscellaneous construction work at Fort Sill, Okla., including sewer system, water supply, and drainage.

One set noncommissioned officers' quarters and administration building at United States Disciplinary Barracks, including water supply and drainage, at Leavenworth, Kans.

Construction of hospital building 3, including water supply, sewerage and drainage, and medical and surgical department, including water supply and drainage, at Hospital, Cal.

Changing hospital into barracks and including water supply and drainage, at McDowell, Cal.

Construction of one double set noncommissioned officers' quarters and administration building at Barracks, N. Y.

Continuing the construction of hospital building 3, including water supply and drainage, and building supplies at Fort Aile, Cal.

Remodeling, etc., of buildings at Barracks and including water supply and drainage, at San Francisco, Cal.

Erection of a new shed at Barracks, Hawaii.

Garage and warehouse, including water supply, sewerage and drainage, at 12 Cavalry station, central building, including water supply, sewerage and drainage, and department laboratory at Fort Sill, Okla.

Additional primary barracks barracks, including water supply and drainage, at barracks damaged by storm, changing hospital into barracks, including water supply and drainage, at Schofield Barracks, Hawaii.

Two double noncommissioned officers' quarters at Fort Sill, Okla.

Four bachelor officers' quarters at Fort Stevens, Nev.

One double set officers' quarters at Fort Terry, N. Y.

Completion of the basement ward B at the Walter Reed Hospital, Washington, D. C.

Also officers' quarters at Culebra, C. Z., were moved to a new location on account of slides, and buildings 3, 9, 12, and 29 at Camp Guadalupe, C. Z., were reconstructed and relocated.

Shooting galleries and ranges.—The Army appropriation act, under heading of "Shooting galleries and ranges," covers the following:

For shelter, shooting galleries, ranges for small-arms practice, repairs, and expenses incident thereto, including flour or paste for marking targets, hire of employees, building ranges and galleries to be open, as far as practicable, to the National Guard and organized rifle clubs under regulations to be prescribed by the Secretary of War, \$45,000.

The following report indicates the expenditures made thereunder:

Construction:	Cost.
Dade, Fort, Florida, rebuilding target-range shelter.....	\$150.00
George Wright, Fort, Washington, material for construction of shooting gallery.....	31.96
Greble, Fort, Rhode Island, target range house storeroom.....	246.82
Kamehameha, Fort, Hawaii, target butts.....	1,100.00
McIntosh, Fort, Texas, replacing revetment and target house on range (Laredo)*.....	170.00
Brownsville, Tex., material for target range, Fourth Infantry*.....	320.10
Canal Zone, temporary butts on range.....	1,000.00
Gaillard, camp, Canal Zone, temporary range.....	309.66
Plattsburg Barracks, N. Y., addition to range house for storage of additional targets.....	451.80
St. Michael, Fort, Alaska, extending shooting-gallery building No. 43..	266.37
Schofield Barracks, Hawaii, revetting range site, excavating, etc.....	9,681.00
Sill, Fort, Oklahoma:	
Target range for school of musketry.....	774.60
Range house for school of musketry.....	605.00
Williams, Fort, Maine, small-arms target range and house.....	396.00
Total.....	15,503.31

Items followed by (*) pertain to Mexican border.

The following items, not included in the foregoing, indicate where target ranges were rented, and cost, for the fiscal year 1916:

Buena Vista, P. I.....	\$111.30
Colchester, Vt.....	276.00
Clackamas, Oreg.....	699.99
Edsall, Va.....	750.00
Fabens, Tex. *.....	30.00
Junemanns Pasture, Tex. *.....	600.00
Laredo, Tex. *.....	420.00
La Teria Tract, Cameron County, Tex. *.....	75.00
Leichuang, China.....	180.00
Do.....	30.00
Marfa, Tex. *.....	75.00
Do. *.....	17.43
Nogales, Ariz. *.....	240.00
Pharr, Tex. *.....	15.00
Total.....	3,519.72

Items followed by (*) pertain to Mexican border.

Military post exchanges.—The Army appropriation act, under heading of "Military post exchanges," covers the following:

For continuing the construction, equipment, and maintenance of suitable buildings at military posts and stations for the conduct of the post exchange, school, library, reading, lunch, amusement rooms and gymnasium, including repairs to buildings erected at private cost, in the operation of the act approved May 31, 1902, for the rental of films, purchase of slides, supplies for and making repairs to moving-picture outfits, to be expended in the discretion and under the direction of the Secretary of War, \$45,839.85.

The following indicates the expenditures made thereunder for construction:

Schofield Barracks, Hawaii, completion of swimming tank.....	\$500.00
Corozal, Canal Zone:	
2 bowling alleys.....	650.00
Equipment.....	130.60
Empire, camp at, Canal Zone, improvements in exchange.....	1,724.00

El Paso, camp at Texas.*

Assembly hall, Sixth Infantry.....	\$201	00
Material for amusement hall, Sixth Infantry.....	541	00
Eagle Pass, Camp, Tex., material for repairing building.....	5	4
Barracks, Fort, Florida, amusement pavilion, wood.....	1	00
Total.....	\$748	04

* Mexican border.

Roads and walks.—Some of the more important projects of this character undertaken during the year are the following:

Front Royal, Va., construction of roads.....	\$5	00	00
Fort Huachuca, Ariz., construction of roads.....	5	00	00
Fort Kaneohe, Hawaii, construction of roads.....	15	00	00
Letterman General Hospital, California, construction of roads.....	2	00	00
Fort Mason, Cal., paving around headquarters and.....	1	00	00
Presidio of San Francisco, Cal., construction of roads.....	1	00	00
Fort Riley, Kans., construction of roads.....	5	00	00
Fort Sam Houston, Tex., roads and walks for the aviation post.....	6	00	00
Schofield Barracks, Hawaii, roads and walks and mud.....	15	00	00
Panama Canal, maintenance and reconstruction of roads within limits of military reservation.....	10	00	00
Fort Huachuca, Ariz., construction of walks.....	5	00	00
Key West Barracks, Fla., construction of walks.....	1	00	00
Fort McPherson, Ga., walk along reservation.....	1	00	00
Vancouver Barracks, Wash., construction of walks.....	4	00	00

Wharves.—At Fort Baker, Cal., a section of a new reinforced concrete wharf was constructed at a cost of \$12,000. The remainder of the work was authorized from funds of the following 1917 fiscal year.

At many of the posts the wharves were extended or reconstructed, some of the more important projects being:

Fort Casey, Wash., reconstruction.....	\$1	45	00
Fort Constitution, Boston, reconstruction of wharf.....	1	45	00
Fort Desha, reconstruction of wharf.....	1	30	00
Jackson Barracks, La., reconstruction of wharf and approach damaged by hurricane.....	1	00	00
Fort Monroe, Va., extending pier for use of.....	1	00	00
Governor's Island, N. Y., construction of wharf and pier.....	10	00	00

Dredging

Fort Huachuca, Ariz., construction of drainage system.....	2	00	00
Fort Sam Houston, Tex., drainage of quadrangle.....	2	00	00
Fort Sumner, Texas, drainage of the levee.....	2	00	00

Dredging

Fort Sumner, Tex., dredging around headquarters wharf.....	2	00	00
West Point, N. Y., dredging around main dock.....	2	00	00

Improvement of grounds, Fort San Francisco, Tex.

The post engineer was authorized to have the grounds and grounds laid out with walks.....	2	40	00
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Recreation grounds, Fort Sumner, Texas.

The post engineer was authorized to have the grounds laid out with walks.....	180	00
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Water supply systems

Fort Bliss, Tex., during the year a new pump- ing plant was installed.....			
Pump.....	\$	500	00
Piping.....		00	00
Valves.....		00	00
Electric power.....	2	00	00
Miscellaneous.....	2	00	00
Total.....	20	00	00
Fort Bliss, Tex., during the year a new pump- ing plant was installed.....			
Pump.....		4,525	00

Some of the more important projects undertaken during the year were:

Fort Mason, Cal., fire-protection system.....	\$1,981.75
Fort Mills, P. I., two air compressors, centrifugal pump, air receivers, etc.	9,902.00
Fort Sam Houston, Tex., pump house, tanks, etc., for aviation grounds..	5,330.75
Schofield Barracks, Hawaii, completing the water-supply system.....	31,320.00
<i>Water-distributing systems:</i>	
Fort Huachuca, Ariz., water and sewer systems for new building.....	19,000.00
Fort Sam Houston, Tex., water-distributing system for aviation post..	4,970.00
<i>Sewer systems:</i>	
Fort Miley, Cal., connecting post with city sewer.....	1,445.00
Fort Sam Houston, Tex., sewer system for aviation post.....	7,392.00
Fort Sill, Okla., sewer for school of fire building.....	1,875.00

Purchase of land, revocable licenses, leases, etc.—Particular attention has been given to leases of Government property under the control of the Quartermaster Corps, in order that the greatest benefit might be derived therefrom. The Secretary of War has authority under the law to lease property not required for immediate military use, for a period not exceeding five years, and revocable at any time. Whenever practicable such leases are entered into after public advertisement and award made to the highest bidder. Oftentimes the grounds, buildings, etc., are kept in repair, etc., by the lessee, as a condition of the lease, and the land, too, is thereby kept from weeds and generally turned back to the Government, after having been cultivated for a period of time, in a much better condition than it would have been had it been allowed to remain unused. Although the funds derived from the rental thereof are not recredited and made available for military expenditure, they are, however, deposited to the credit of the Treasurer of the United States as miscellaneous receipts and indirectly operate to lowering the cost of the Military Establishment.

During the past fiscal year this office recommended, and the recommendation was approved by the Secretary of War, that hereafter leases of Government property to others be executed in quintuplicate, one copy to be furnished the lessee, one copy filed with the records of the post concerned, one copy returned for file in the office of the Judge Advocate General, as required by law, one copy sent to the Auditor for the War Department, and the remaining copy furnished for the information of this office. The point raised by this office was that heretofore there had been no complete and adequate check upon the receipts collected from the lease of such property, or of any moneys received from licenses, and it is believed that the plan adopted will eliminate that objection.

The amounts expended for the purchase of land, etc., and a statement of changes in military reservations, also a list of revocable licenses granted during the year, as far as shown by the records of the Quartermaster General's office, will be found in Exhibits Nos. 10 and 11.

Front Royal, Va.—Vouchers were prepared in October, 1915, and payments made to Mrs. Alma Jackson and R. H. Jackson, in the sum of \$1,042.19, for the acquisition of 108 acres and 120 square poles; and to Miss Lucy E. Barbee, in the sum of \$1,068.13 for 85 acres and 20 square poles. This completed the purchase of the land authorized by Army act of March 3, 1911. (See p. 35 of the annual report for 1915 for details.)

Presidio of San Francisco, Cal.—The sum of \$100,000, appropriated by the sundry civil act of March 4, 1909, remains available and covers the purchase of land and acquisition of water rights on Lobos Creek. An agreement, dated June 10, 1915, between the Department and the Spring Valley Water Co., under the terms of which the Government will pay to the above-mentioned company \$98,937.50 upon being furnished with a deed conveying a good and valid title to the property, remains in effect. The deed has not as yet been furnished, but the negotiations are in process and it is expected soon to close this matter.

Tobyhanna, Pa.—During the past fiscal year, the Henry Pratt tract, comprising about 422 acres, was purchased from the owner, Mr. Thomas Brady, for the sum of \$1,255. This money came from the original appropriation of \$50,000 made in the Army act for 1914. (See p. 36, annual report for 1915, for further details.) Two small tracts still remain to be acquired through condemnation proceedings.

Fences.—The total amount expended from the appropriation "Supplies, Services and Transportation, Quartermaster Corps," during the fiscal year, for the construction of reservation fences, was approximately \$2,937.50, which includes \$1,632.10 for a fence at Fort Barry, Cal., \$388 for material for construction and repair of fences at Reno, Okla., \$372.40 for extension of fences along southern boundary of Fort Sill, Okla., and \$545.56 for a woven-wire fence on the east side of the reservation at Vancouver Barracks, Wash. For corral fences, which are constructed from the appropriation "Barracks and quarters," see Exhibit No. 9.

Bake ovens and apparatus.—The cost of bake ovens, dough mixers, bread racks, and other equipment for post bakeries, is defrayed from the appropriation "Supplies, Services and Transportation, Quartermaster Corps." During the past fiscal year these articles were purchased on approved requisitions by the depot quartermaster, Jeffersonville, Ind., at a cost of \$11,466.12.

Heating installations.—There have been authorized during the year in connection with heating installations the following:

Fort Bliss, Tex., hot-water heating apparatus in 5 captains' quarters and 8 lieutenants' quarters.....	\$9,090.00
Fort Keogh, Mont., heating system in officers' quarters No. 2.....	850.00
Fort Liscum, Alaska, supplies for installation of steam heating plant in officers' quarters No. 33.....	593.80
Fort Moultrie, S. C., hot-water heating plants in 5 sets captains' quarters and 5 sets lieutenants' quarters.....	6,635.00
Philadelphia Depot, Pa., material for connecting officers' quarters to central heating plant.....	650.00
Fort Sill, Okla.:	
Steam-heating plants in 13 sets officers' quarters, old post.....	11,475.00
Steam-heating plants in 6 sets officers' quarters, old post.....	4,200.00

Lighting systems.—Under this heading there has been expended during the year from the appropriation "Supplies, Services, and Transportation, Quartermaster Corps," for the installation, extension, and improvement of electric-lighting systems, the following amounts at the posts named:

Fort Baker, Cal., material for electric-lighting systems on road between post and Sausalito.....	\$942.83
Fort Hamilton, N. Y., extension of lighting system.....	411.83

Fort Huachuca, Ariz., combination electric light, power, and ice plant, including electric distribution system, wiring and fixtures in buildings (lighting portion only).....	\$77, 115. 00
Fort Keogh, Mont., electric-lighting system.....	2, 268. 00
United States Disciplinary Barracks, Fort Leavenworth, Kans.:	
Traveling crane in power plant.....	1, 010. 00
Purchase and installation of 300-kilowatt turbo-generator and switch-board.....	13, 689. 00
Letterman General Hospital, California:	
Metering feed water-heater and purifier in power plant.....	2, 626. 00
Two boiler feed pumps in power plant.....	1, 144. 00
Fort McIntosh, Tex., installation electric-light system.....	2, 079. 23
Presidio of San Francisco, Cal., changing location of pole line and making improvements to lighting system, West Cantonment.....	1, 274. 87
Fort Ruger, Hawaii, electric line along engineers' trail to Diamond Head.	795. 00
Fort Sam Houston, Tex., exterior and interior lighting system, aviation post.....	2, 017. 00
Fort Sill, Okla.:	
Wiring and fixtures in extension of barracks and stables.....	800. 52
Wiring and fixtures in remodeled buildings, old post.....	1, 500. 00
Boiler feed pump, additional feed-water lines and steam header for power plant.....	855. 00
Fort Snelling, Minn.:	
Installation electric motor-driven machinery for power plant.....	2, 878. 00
Smokestack for power plant.....	580. 00
Fort Strong, Mass., connecting hoisting engine with central power plant..	859. 52
Fort Terry, N. Y., new street-lighting system.....	1, 765. 00

Ice and refrigerating plants.—The following work has been authorized during the fiscal year in connection with ice and refrigerating plants:

At Fort Bayard, N. Mex., the walls in refrigerating room of ice plant have been rebuilt, at a cost of \$1,131, and a complete ice and refrigerating plant, with a capacity of 20 tons refrigeration per day, in combination with the electric light and power plant at Fort Huachuca, Ariz., has been installed, at a cost of \$20,050.

Laundry plant.—The only laundry plant installed during the year is that at Fort Huachuca, Ariz., at a cost of \$33,047.40.

Incandescent lamps.—There has been expended for the purchase of incandescent lamps in the United States, \$20,868.01. All lamps now being supplied are of the Tungsten type, and are purchased through the General Supply Committee and distributed through the New York depot. The supply of lamps for the ensuing fiscal year will be of the nitrogen-filled Tungsten type in lieu of the vacuum Tungsten, on account of the greater efficiency which will thus be obtained. The supply of carbon lamps is exhausted, and the Gem lamp is nearly so. These latter two types of lamps are no longer purchased by this department.

Purchase of light.—For the purchase of light there has been authorized during the fiscal year the following amounts:

Electric current and gas.....	\$361, 287. 21
Mineral oil.....	48, 014. 98
Total.....	409, 302. 19

Fuel.—There has been expended during the fiscal year for fuel in kind and purchase of heat the following amounts:

Fuel in kind, for heating public buildings, and power purposes.....	\$1, 755, 035. 76
Heat, purchase of.....	36, 837. 74
Fuel for pumping plants.....	132, 243. 75
Fuel for incinerators.....	34, 989. 45
Fuel, blacksmith coal, and charcoal.....	5, 251. 40

Wall lockers.—Wall lockers are purchased for installation in barracks and the cost is defrayed from the appropriation "Barracks and quarters." They are also sometimes issued to offices. As they can be purchased cheaper when large lots are obtained, the Quartermaster Corps makes contract, upon which the Office of the Surgeon General sometimes draws for installation in hospitals, in which event reimbursement of appropriation from which purchased is made from the appropriation "Construction and repair of hospitals;" \$23,044.01 expended fiscal year 1916.

Annual repairs to buildings, etc.—Based on the estimates of March 1, 1915, received from military posts and depots, apportionments were made to departments and independent stations at the beginning of the fiscal year 1916 for annual repairs to buildings and systems. From the apportionments to departments, allotments were made to each post by the department commanders within the limits of the funds available. Instructions were given to retain a reserve balance in each department to meet unforeseen contingencies. The total amount apportioned for annual repairs from each appropriation of the fiscal year 1916, not including the Philippine Islands, was approximately as follows:

Barracks and quarters: General repairs to buildings.....	\$616, 507. 03
Military post exchanges: Repairs to post exchanges, gymnasiums, bowling alleys, gymnastic apparatus, etc.....	11, 358. 00
Supplies, service, and transportation, Quartermaster Corps:	
Repairs to reservation fences, lighting and heating plants, exterior lighting and heating systems, lighting and heating within buildings, bakery buildings, bake ovens and equipment, ice and refrigerating plants, and laundry buildings.....	117, 908. 10
Repairs to water systems and pump houses, sewer systems, sewerage-disposal plants and crematories, plumbing in buildings, and fire apparatus.....	\$134, 331. 57
Repairs to flagstuffs, picket lines, and electric-bell systems.....	4, 171. 00
Railroad equipment.....	2, 832. 00
Total.....	259, 242. 67
Roads, walks, wharves, and drainage: Repairs to roads, walks, curbs, gutters, railroad tracks, wharves, seawalls, retaining walls, drains, and drainage; also improvement of grounds.....	208, 303. 00
Shooting galleries and ranges: Repairs to buildings on target ranges, etc..	9, 049. 15
Construction and repair of hospitals: Repairs to hospital buildings.....	77, 578. 26
Quarters for hospital stewards: Repairs to hospital stewards' quarters...	10, 191. 15

Special repairs, alterations, and improvements.—In addition to the annual apportionments for repairs as stated above, expenditures were authorized in the course of the past fiscal year for special repairs, exclusive of Mexican border expenditures (the necessity for which could not be anticipated when the annual estimates were prepared), and for alterations and improvements in buildings, exterior systems, and grounds of the various military posts and stations. The total amount expended for special repairs, alterations, etc., from each appropriation was approximately as follows:

Barracks and quarters (including door and window screens, storm doors, etc.).....	\$191, 991. 16
Military post exchanges (including gymnastic apparatus, etc.).....	25, 076. 25
Construction and repair of hospitals.....	29, 153. 99
Quarters for hospital stewards.....	814. 89
Supplies, services, and transportation, Quartermaster Corps.....	121, 093. 36
Roads, walks, wharves, and drainage.....	61, 804. 86
Total.....	429, 934. 51

Mexican border.—The following is a summarized statement of expenditures made during the past fiscal year to provide necessary accommodations and conveniences for troops on the Mexican border:

Temporary storehouses, kitchens, mess halls, stables, latrines, screening, etc., flooring and framing of tents, assembly and amusement halls, hospitals, bakeries, etc.....	\$213, 932. 43
Repairs to temporary shelter, etc.....	16, 663. 29
Electric lighting of camps, installation and repairs.....	9, 992. 08
Construction and repair of water-supply systems and plumbing.....	32, 070. 96
Roads, walks, drainage, etc., at camps.....	2, 093. 12
Fitting up target ranges, repairs, etc., including rentals.....	3, 037. 59
Miscellaneous supplies.....	42, 980. 80
Total.....	320, 770. 27

Losses by fire and storm.—The losses by fire and storm during the fiscal year 1916 were as follows:

Fort Thomas, Ky., July 7, 1915, buildings Nos. 2, 3, 15, 17, 18, 19, 26, 43, and 56 were damaged by storm to the extent of \$2,562.10. Extensive damage was caused to glass, electric and telegraph lines and poles.

Valdez, Alaska, July 15, 1915, building No. 2 (post office, storeroom, and stables) was destroyed by fire.

Fort Revere, Mass., August 9, 1915, stable No. 6 was struck by lightning and damaged to the extent of \$200, and forage loss amounted to \$300.

Camp Stotsenburg, P. I., July 9, 1915, the machine-gun platoon stables, building No. 382, was damaged by fire to the extent of \$700.

Fort Howard, Md., August 4, 1915, damage by storm, \$1,000.

Fort Carroll, Md., August 4, 1915, damage by storm \$25.

Fort Armistead, Md., August 4, 1915, damage by storm \$20.

Fort Smallwood, Md., August 4, 1915, damage by storm \$5.

Fort McHenry, Md., August 4, 1915, damage by storm \$400.

Presidio of San Francisco, Cal., August 27, 1915, brigade commander's quarters No. 22 was totally destroyed by fire, at a loss of \$12,617.05.

Fort Crockett, Tex., August 16-18, 1915, buildings, roads, sewers, water system, batteries, electric lighting, and telephone systems were damaged by severe hurricane in the total sum of \$338,680.

Fort Slocum, N. Y., September 18, 1915, the coal dock was damaged by fire, loss \$820.

Washington Barracks, D. C., September 23, 1915, lumber shed and storeroom were destroyed by fire, and on September 26, 1915, quartermaster stable (No. 24A) was damaged by fire.

Jackson Barracks, Fort St. Philip, and Fort Jackson, La., September 29, 1915, buildings, wharves, and property were badly damaged by hurricane; estimated damage to buildings \$13,000, lighting systems \$1,000, hospital \$800, wharf \$5,000. Launch *Mansfield* was sunk.

Vancouver Barracks, Wash., October 4, 1915, building No. 145, brigade headquarters office, was damaged by fire.

Fort Bliss, Tex., October 15, 1915, storeroom in rear of basement under bakery in building No. 57 was damaged by fire.

Fort Sill, Okla., October 15, 1915, saddle shops, school of musketry, was damaged by fire to the extent of about \$125. A lot of target cloth was destroyed.

Fort St. Michael, Alaska, October 27, 1915, post laundry building No. 57 and contents were totally destroyed by fire.

Fort Sill, Okla., November 1-2, 1915, post exchange building (new post) was damaged by fire to the extent of \$80.

Fort Ontario, N. Y., November 19, 1915, buildings were damaged by storm to the extent of approximately \$135.

Fort Slocum, N. Y., November 19, 1915, porch in rear of barracks, building No. 84, was damaged by storm to the extent of about \$71.93.

Madison Barracks, N. Y., November 20-21, 1915, buildings damaged by windstorm to the extent of about \$400.

Presidio of San Francisco, Cal., December 2, 1915, officers' quarters No. 19, main post, was damaged by fire apparently due to defective flue. Damage confined to two rooms and portion of roof.

Fort Dade, Fla., December 4, 1915, range shelter, building No. 32, totally destroyed by fire, loss \$150.

Fort Mills, P. I., December 7, 1915, buildings, etc., damaged by typhoon to the extent of \$11,596.50.

Camp Eldridge, P. I., December 7, 1915, buildings, etc., damaged by typhoon to the extent of \$61.40.

St. Francis Barracks, Fla., December 13, 1915, building known as "Monastery" used for offices of militia, State of Florida, destroyed by fire. Quantity of militia property and all records destroyed.

Valdez, Alaska, December 23, 1915, Hogan telegraph station destroyed by fire.

Schofield Barracks, Hawaii, December 25, 1915, three Infantry and two Cavalry barracks were destroyed by tornado, and 150 other buildings were damaged. The board of officers' report stated that the total damage was to the extent of \$29,377. Request was made for \$25,000, but owing to the low state of appropriation, this office authorized but \$15,000 for immediate repairs.

Fort Hamilton, N. Y., December 26, 1915, roof of building No. 77S damaged by storm to the extent of \$200.

Fort Strong, Mass., December 26, 1915, building No. 42, barracks, partly unroofed by storm; also damage to porch.

Fort Huachuca, Ariz., December 29, 1915, building No. 17, barracks, damaged by fire.

Presidio of San Francisco, Cal., December 29, 1915, band barracks, building No. 164, main post, was damaged by fire.

Fort Miley, Cal., January 2-3, 1916, buildings were damaged by gale to extent of \$800. Main sewer and drain pipe damaged to the amount of \$100; also, shooting-gallery roof damaged.

Fort St. Michael, Alaska, January 4, 1916, all buildings damaged by storm, porches destroyed, and all docks damaged. Amount of loss, \$5,000.

Unalaska, Alaska, January 9, 1916, building No. 49, telegraph station, destroyed by fire.

Balsovia, Alaska, January 4, 1916, building No. 64, fish cache, destroyed by storm.

Fort Ontario, N. Y., January 17, 1916, barrack building No. 24 was seriously damaged by storm to the extent of about \$1,793.10.

Fort Huachuca, Ariz., January 30, 1916, stable No. 28 collapsed under weight of snow, amount of damage \$430; telegraph line destroyed.

Fort Flagler, Wash., January 23, 1916, wharf building No. 42 damaged by storm to the extent of \$650.

Whipple Barracks, Ariz., January 26-27, 1916, old blacksmith shop destroyed by storm, 200 yards of fence washed out, and county road damaged.

Governors Island, N. Y., January 27-28, 1916, building No. 15, offices of department staff, damaged by fire to the extent of \$40.

Fort Ontario, N. Y., February 7, 1916, buildings Nos. 5, 6, 8, 10, and 24 damaged by wind storm.

Fort Reno, Okla., February 9, 1916, building No. 97 destroyed by fire.

Eagle Pass, Tex., February 22, 1916, hay shed destroyed by fire.

Fort Gibbon, Alaska, March 7, 1916, building No. 2, barracks, destroyed by fire, including all property, records, etc. Three soldiers' lives lost.

Presidio of Monterey, Cal., March 13, 1916, administration building No. 20 destroyed by fire. Original cost, \$1,000.

Fort Slocum, N. Y., March 17, 1916, building No. 23, tinnery shops, damaged by fire to the extent of about \$44.50.

Fort Leavenworth, Kans., March 20, 1916, crematory (new) building No. 332, with all electrical apparatus, destroyed by fire. Furnace and chimney not injured. Estimated damage, about \$1,495.29.

Plattsburg Barracks, N. Y., March 31, 1916, post hospital was damaged by fire and \$20 was authorized to repair the same.

Fort Williams, Me., April 8, 1916, post gymnasium damaged by fire to the extent of \$108.

Fort Walla Walla, Wash., April 21, 1916, barrack building No. 9 was totally destroyed by fire, and building No. 20, formerly used as administration building and commissary, about half destroyed.

Fort Mills, P. I., April 21, 1916, company barracks (C. A. C.), was damaged by fire to the extent of \$10.

Fort Adams, R. I., May 9, 1916, building No. 42A was damaged by fire to the extent of \$60.

Fort Crook, Nebr., May 14, 1916, the chimney to the post hospital was damaged by lightning and \$31.65 authorized to repair the same.

Fort Bliss, Tex., May 13, 1916, stables of Troops C and D were destroyed by fire.

Rentals.—The total amount expended from the appropriation "Barracks and quarters," fiscal year 1916, for the rental of quarters, offices, storehouses, stables, recruiting stations, lodgings, camp sites, etc., was approximately \$451,556.41. This amount includes \$50,000 allotted for all rentals in China.

It was not necessary to rent quarters for officers during the fiscal year 1916, and a large reduction in the total cost of rentals has resulted thereby, all officers having been placed on a commutation status by law. Barracks were rented on the Mexican border for noncommissioned officers and enlisted men at a total cost of \$3,867.64 the larger rentals being at Texas City, Tex., in the sum of \$2,075.14, due to the storm of August 15–16, 1915, and at Mission, Tex., in the sum of \$1,031.50. In addition to the above quarters were hired for noncommissioned officers on general recruiting service, who were authorized by the Secretary of War to live separate from the recruiting party at an approximate cost of \$13,262.94. Quarters with the heat and light included were obtained at an average cost of \$15 per man per month.

Offices were rented at a total cost of \$50,650.85.

Storehouses were rented at a total cost of \$91,105.44.

The cost of stabling public animals and authorized private mounts of officers during fiscal year 1916 was approximately \$27,022.92, the rentals being distributed over approximately 61 different cities in the United States. The average rental paid for stable proper was \$10 per horse per month.

The rental of main and auxiliary recruiting stations during the fiscal year 1916 (not including lodgings) amounted to approximately \$100,526.28. A total of 140 new auxiliary recruiting stations were rented during March, April, May, and June, 1916, when it became necessary to increase the Army under emergency.

The cost of lodgings for enlisted men on duty at recruiting stations, applicants for enlistment and recruits, amounted to approximately \$81,810.88.

Congress appropriated \$45,987 for rental of offices, warehouses, and quarters in the District of Columbia. An unexpended balance of \$13,347.90 remains.

TRANSPORTATION.

ARMY TRANSPORT SERVICE.

Owned service.—This service consists of 16 ocean-going vessels, owned and operated as required for the transportation of troops, animals, and supplies for the Army. These vessels were engaged in service or stationed at the close of the fiscal year as follows:

Name.	Class.	Location.
PACIFIC FLEET.		
Burnside.....	Cablesnip.....	Cable service, Tacoma, Wash.
Crook.....	Troop ship.....	Undergoing repairs, San Francisco, Cal.
Dix.....	Freight and animal ship.....	Trans-Pacific service.
Logan.....	Troop ship.....	Out of commission, San Francisco, Cal.
Sheridan.....	do.....	Trans-Pacific service.
Sherman.....	do.....	Do.
Thomas.....	do.....	Do.
Slocum.....	Tug.....	In service, San Francisco, Cal.
ATLANTIC FLEET.		
Buford.....	Troop ship.....	At Manila, P. I.
Kilpatrick.....	do.....	New York and Canal Zone service.
McClellan.....	Refrigerator ship.....	Out of commission, Newport News, Va.
Meade.....	Troop ship.....	Do.
Sumner.....	do.....	At Vera Cruz, Mexico.
PHILIPPINE FLEET.		
Liscum.....	Troop ship.....	Interisland service.
Merritt.....	do.....	Do.
Warren.....	do.....	Do.

Movement of transports.—The transports have been operated without interruption upon a monthly schedule between San Francisco, Cal., and Manila, P. I. The *Logan* was dispatched as an extra transport, leaving San Francisco January 7, 1916, and after taking aboard the Twenty-seventh Infantry at Balboa, Canal Zone, arrived at Manila March 5, 1916. Besides other cargo this transport carried 778 tons of ordnance material for fortification work in the Philippines. This ship returned to San Francisco April 20, 1916, and soon after made ready for interchanging troops in Alaska, but the movement was suspended, due to the mobilization of troops on the Mexican border.

The *Buford* was in service during the greater part of the year, leaving Galveston, Tex., September 29, 1915, with the Twenty-seventh Infantry aboard for Manila, P. I., but the Panama Canal being closed, the troops were disembarked and the ship utilized for the return of the Twenty-third Infantry from Jacksonville, Fla., to Galveston, thence going to New York to carry Company A, Signal Corps, with its complement of animals and equipment to the Canal Zone. After completion of this duty, the *Buford* was loaded at Newport News and New York with turret material for the Philippines, where the vessel arrived May 28, 1916.

The *Kilpatrick* left Galveston, Tex., September 20, 1915, with the Twenty-third Infantry, which was disembarked at Jacksonville, Fla., for duty at the National Matches. Commencing in February, 1916, this transport made three voyages to the Canal Zone, taking on the first trip the First Squadron, Twelfth Cavalry; on the second trip Batteries E and F, Fourth Field Artillery; and on the third trip, the Fifth Band and five companies Coast Artillery Corps. After completion of this special service, the *Kilpatrick* was continued in operation upon a regular monthly schedule between Christobal, Canal Zone, and New York, the expense connected therewith being divided in accordance with the terms of an agreement between the Panama Canal and the Quartermaster Corps, mutually advantageous to all concerned.

The *Sumner* was hurriedly made ready for sea at the request of the State Department and left Newport News June 23, 1916, for Vera Cruz, Mexico, where 606 refugees were taken aboard for disembarkation at Port Tampa, Fla., and New Orleans, La. At the latter port 173 Porto Rican refugees from Progreso, Mexico, were embarked after the close of the fiscal year and landed at Ponce, P. R., after which the transport was again placed out of commission at Newport News, Va.

Philippine cargo.—Owing to the shortage of ocean tonnage upon the Pacific available for the movement of products of the Philippine Islands, it was decided by the Secretary of War to utilize the cargo space upon returning transports for the carrying of such products of the Philippine Islands as could not be taken by commercial carriers. By agreement the Philippine government will reimburse the War Department for all additional expenditures incident to the handling of such cargo upon the transports and will deposit the remainder of the freight charges collected from shippers to the credit of the United States Government.

Special duty for "Crook."—Under agreement with the Interior Department, steps were taken to prepare the *Crook* for service in connection with the Alaskan Engineering Commission between the United States and Alaskan ports. The ship will be operated by the Quartermaster Corps, but the entire expense of operation will be borne by the Alaskan Engineering Commission. The *Crook* left Seattle, Wash., for the first voyage on August 5, 1916.

REPAIRS.

San Francisco.—The transports having San Francisco as a home port have been maintained in good running condition by repairs at the end of each round voyage, which have averaged in cost \$3,850 per vessel for each voyage. The *Sherman* and *Logan* have been withdrawn from service in turn during the year for chipping of iron-work and overhauling, which could not be accomplished between voyages.

Seattle.—Necessary repairs to the *Dix* were made during the year at an aggregate cost of \$24,457.38, and to the *Burnside* at a cost of \$13,699.87.

Newport News and New York.—Repairs to the *Kilpatrick* during the year have aggregated \$31,786.59; to the *Buford*, \$11,546.39; to the *Sumner*, \$27,810.64; and the *McClellan*, \$9,550.

Service for other departments.—There have been carried by the transports during the year for other departments and for the Philippine government, passengers and freight, the value of which at tariff rates would be as follows:

Navy Department.....	\$308, 105. 32
Post Office Department (including 495,276 pounds mail).....	157, 390. 30
Philippine government.....	158, 905. 86
Other departments.....	7, 583. 96
Total.....	631, 985. 44

WORK OF THE TRANSPORTS.

The following is the summary of the work performed by the transports during the year:

PASSENGERS.

Between—	Sailings.	Officers.	Enlisted men.	Civilians.	Total.
San Francisco and Philippine Islands.....	13	367	5,792	1,500	7,659
Manila and San Francisco.....	13	288	7,477	1,905	9,670
Seattle and Manila.....	3	.....	18	.....	18
New York and Philippines.....	1	2	2	25	29
United States ports and Canal Zone.....	7	118	2,564	81	2,763
Other ports.....	.....	864	12,507	3,022	16,393
Total.....	.....	1,639	28,360	6,533	36,532

CARGO.

Between—	Animals.	Freight (tons).	Remains.	Lumber (feet).	Mails (pounds).	Money (dollars or pesos).
San Francisco and Philippine Islands.....	138	33,521	.....	.....	234,059	1,823,854
Philippine Islands and San Francisco.....	.....	17,614	60	.....	76,745	184,773
Seattle and Philippine Islands.....	788	14,623	.....	676,653	.....	.....
San Francisco and Honolulu.....	15	4,601	.....	.....	45,340	.....
United States and Canal Zone.....	865	10,165	.....	.....	.....	.....
Other ports.....	371	12,322	45	63,755	139,132	.....
Total.....	2,171	92,846	105	740,408	495,276	2,008,627

Earnings and expenditures.—The earnings of the transports during the year for the above service, based on the lowest rates offered for similar service by commercial lines, have been:

For passengers.....	\$2, 094, 336. 84
For cargo.....	1, 583, 966. 33
Total.....	3, 678, 303. 17

At public commercial rates the earnings would be:	
For passengers.....	2, 103, 816. 84
For cargo.....	1, 584, 578. 17
Total.....	3, 688, 395. 01

The foregoing does not take into consideration the value of transporting families of officers, soldiers, and employees, or of the other persons not entitled to transportation at the expense of an appropriation of the United States or of the Philippine government.

The value of such gratuitous service during the year, however, aggregated \$568,612.97.

The expenditures for the operation and maintenance of the transports during the year were as follows:

	In commission.	Out of commission.	Total.
Wages of officers and crew.....	\$671, 683. 81	\$33, 418. 69	\$705, 102. 50
Repairs.....	165, 608. 24	28, 798. 65	194, 406. 89
Fuel.....	418, 556. 37	3, 163. 09	421, 719. 46
Deck, engine, and steward's supplies.....	562, 009. 56	9, 276. 48	571, 286. 04
Miscellaneous.....	158, 464. 09	4, 401. 37	162, 865. 46
Total.....	1, 976, 322. 07	79, 058. 28	2, 055, 380. 35

Shore expenses, including proportionate part of salaries of officers, commutation of officers' quarters, wages of employees, rent of offices, warehouses, wharves, etc., were as follows:

San Francisco.....	\$53,349.52
Seattle and Tacoma.....	8,220.51
Galveston and Newport News.....	30,678.51
Honolulu.....	5,384.25
Nagasaki (estimated).....	9,983.11
New York.....	1,781.32
Manila (estimated).....	21,023.90
Total for this purpose.....	130,421.12
Grand total.....	2,185,801.47

Included in these expenditures is the cost of operating and maintaining the *Burnside* while engaged in cable work for the Signal Corps of the Army, the total of which was \$106,004.83.

Inasmuch as the service rendered by the *Burnside* was not performed in the interest of the Quartermaster Corps, the expenditure in connection therewith should be deducted, leaving the net cost to the Government on account of the transportation of troops, supplies, etc., and the maintenance of all transports, both active and inactive, during the year \$2,079,796.64.

RECAPITULATION.

	Lowest commercial rate.	Public commercial rate.
Earnings of the transports during the year.....	\$3,678,303.17	\$3,688,395.01
Expense of operation and maintenance during the same period.....	2,079,796.64	2,079,796.64
Savings to the Government by using transports over same service by commercial vessels.....	1,598,506.53	1,608,598.37

HARBOR BOAT SERVICE.

Owned service.—The department has operated during the fiscal year in the various harbors along the Atlantic, Pacific, and Gulf coasts and rivers tributary thereto the following vessels:

6 first-class steel mine planters,
2 cable steamers,
2 ferry steamers,
24 passenger and freight steamers,
28 tugs and Artillery steamers,
3 lighters,
38 steam and gasoline launches,
30 distribution box boats,

a total of 133 owned vessels (exclusive of 118 mine yawls and miscellaneous small craft) engaged in Quartermaster, Artillery, and Signal Corps work. The total expenditure for wages of officers and crews, fuel, supplies, repairs, water, etc., was \$1,538,777.81.

These vessels carried during the year 2,668,943 passengers and 153,483,520 pounds of freight.

Chartered service.—To supplement the foregoing service, chartered vessels were operated in connection with the coast defenses of Narragansett Bay, between Newport and Fort Greble, R. I., at a total cost of \$9,288. The entire cost of the chartered service at all points,

including the cost of the hire of substitute vessels for short periods to replace owned vessels undergoing repairs and of vessels hired for towing targets, vessel tracking, subcaliber practice and like purposes for the Coast Artillery, which could not be performed by owned vessels, amounted to \$23,429.41.

Vessels disposed of.—The electric launch *West Point* having been reported to be in an unserviceable condition and not worth the cost of necessary repairs, was disposed of by sale November 11, 1915.

Vessels lost.—During the year the following small vessels were lost: *Lieut. Selfridge*, lost in storm; distribution box boat No. 8, lost in storm; distribution box boat No. 16, run down by tank steamer and sunk; mine yawl *M-25*, lost in storm; mine yawl No. 41, lost in storm.

The launch *Mansfield* sank in the Mississippi River, but was subsequently raised and restored to serviceable condition.

Vessels acquired.—The following vessels were acquired or contracted for during the fiscal year.

One 171-foot twin-screw steel mine planter and cable steamer, to be constructed and delivered before July 1, 1918, under contract with the New York Shipbuilding Co., at a cost of \$331,000, without boilers. This steamer will be known as the *General Wm. M. Graham*, and is intended for service at the Panama Canal Zone.

Eight 30-foot standard mine yawls (four with gasoline engines) were constructed at the New York Navy Yard at an approximate cost of \$7,500. Six of the yawls were assigned to the coast defenses, Panama Canal Zone, and one each to Fort H. G. Wright, N. Y., and Fort Hancock, N. J.

One 64-foot large distribution box boat, afterwards named *L-36*, was constructed at Gulfport, Miss., under contract with T. M. Favre, at a cost of \$11,800, and assigned to duty in the coast defenses, Panama Canal Zone.

One houseboat for service in the waters of the Panama Canal Zone was authorized at a cost of \$4,500 and also \$1,600 for the purchase of the material for a similar boat for the same coast defenses. The latter vessel has been named the *Capt. W. F. Endress*.

Two motor sailing launches were purchased from the Navy Department for service in the Panama Canal Zone at an approximate cost of \$5,600. These vessels have been named the *Lieut. C. F. Conry* and *Lieut. H. R. Adair*.

Betterments.—During the year the masts of several mine planters were lengthened, as required to permit the use of radio outfits of greater range furnished by the Signal Corps.

Philippine Army transport service.—The owned transports *Liscum*, *Merritt*, and *Warren* have been operated during the year and made a total of 34 voyages to various ports in the Philippines and China. These vessels carried upon these voyages 7,360 passengers, 599 animals, 45 remains, 26,495 tons of freight, 9,658 feet of lumber, and \$975,737.60 in United States or Philippine Islands currency, all entitled to transportation at Government expense, the value of which transportation at commercial rates for similar service amounted to \$251,116.98. There were also carried 16,953 passengers and 1,062 cubic tons of freight, for which no credit has been taken, the value of which at regular rates was \$97,387.18.

The expenses of the whole service amounted to \$585,239.25, and after allowing the proper proportion of shore expenses chargeable to

and Morgan Line steamships (via Galveston and rail) from October 15, 1915, to May 31, 1915, at an agreed rate of 90 cents per 100 pounds. On the latter date both companies canceled their agreements and shipments thereafter were forwarded over various lines at regular tariff rates, less land-grant deductions.

Bids were invited for transportation from New York City to San Francisco, Honolulu, and Manila for the fiscal year 1917, but no bids were submitted carrying a lower rate than was available under regular tariffs and all bids were rejected and shipments for the fiscal year 1917 will be forwarded by such routes as desired at open rates.

Cooperation between the transportation companies and the Quartermaster Corps.—Especial attention was devoted during the fiscal year 1916 to the establishment of a closer cooperation between the Quartermaster Corps and the various transportation interests with a view to coordination in the movements of troops and supplies for the Army. The officer in charge of the transportation division, Office of the Quartermaster General, appeared before several of the transportation associations and outlined a plan of mutual cooperation which would be of benefit to both the carriers and the Government in case any necessity arose involving the transportation of large numbers of troops, the plan outlined being practically that which has since been placed in effect.

Under date of October 16, 1915, a letter was prepared in the office of the Quartermaster General recommending that the Secretary of War communicate with the American Railway Association (which association is composed of the presidents, general managers, and other chief operating officials of the American railways) and suggest the establishment within that association of a committee on military transportation to whom the department could look for any information that might be desired as to the railroads of the United States, and with a further view to coordination and cooperation between the railroads and the War Department in the transportation of troops and supplies of the United States. On October 26, 1915, a letter of the nature indicated was sent by the Secretary of War to the American Railway Association, and after some further correspondence a "Special committee on cooperation with the military authorities" was appointed by that association. This committee was, and is, composed of the following gentlemen: Fairfax Harrison (chairman), president Southern Railway; R. M. Aishton, president Chicago & North Western Railway; A. W. Thompson, vice president Baltimore & Ohio Railroad; W. G. Besler, president Central Railroad of New Jersey. Conferences were held with this committee, and a general plan of cooperation outlined to be placed in effect at the time of any public emergency.

Immediately after the call for mobilization of the State troops was issued, this committee met in the office of the Quartermaster General with Lieut. Col. Chauncey B. Baker, representing that office, and the plans previously determined were at once placed in effect. Arrangements were made for placing a competent railroad official at each department headquarters, at each mobilization camp, and in the office of the Quartermaster General. These representatives were to act as advisors to the officers of the Quartermaster Corps at these various points on any matters affecting rail transportation.

They were all men of the highest reputation in the railroad world, and did not represent any particular railroad but were representatives of all lines interested.

Directly after the announcement of the mobilization this committee of the American Railway Association also called upon representatives of the various railroads of the country to meet in Washington for the purpose of extending every possible assistance among the railroads themselves. The object of this meeting was to make all of the railroad equipment, motive power, and personnel, of the country available to effect this movement in the most expeditious manner possible.

The main object of the special committee on cooperation with the military authorities was to assist the War Department in the transportation of troops and supplies, and the committee acted only on instructions from the War Department, except in matters directly affecting the operation of trains.

When it was definitely known that an organization was to move, the camp quartermaster consulted with the American Railroad Association representative at his camp and advised him as to the strength of the organization, and it was the duty of the American Railway Association representative to see that all railroad equipment, other than tourist cars, was promptly assembled in time for the movement. Tourist cars were ordered direct from the office of the Quartermaster General, and the camp quartermaster was immediately advised by wire whether tourist cars could be furnished from point of origin; if not, the American Railway Association representative was so advised, and it was his duty to see that coaches were secured for the movement.

In 1912 the Quartermaster General's Office took up with the American Railway Master Car Builders' Association the question of placing placards, in time of war or threatened war, on all carload shipments of Government property. As a result of a large amount of correspondence, a plan was formulated which was accepted by all the railroads in the country and a series of placards adopted.

Through the agency of the American Railway Association all railway officials and employees were notified that cars so placarded must be given right of way from point of origin to point of destination. Such cars are placed in the fastest moving freight trains and kept constantly moving to point of destination, where they are immediately delivered and at once identified, shifted into position, discharged, and released without the necessity of waiting for the formal bills of lading and official papers of the railways and the Government; the placards themselves serving to fully identify all shipments. All placards bear the legend "United States Army" at the head, followed by the department to which supplies belong, the car initial, car number, point of shipment, contents, consignee, destination, routing, date shipped, and consignor. Cars bearing these cards are never sidetracked nor shifted into yards except to be placed in through freight trains. Should a car become damaged through any cause, it is given preference and precedence for any repairs, and if repairs require an extended period, contents are loaded into another car and the movement continued.

As a result of this understanding between the railroads and the Quartermaster General's Office, shipments of freight are being made

with remarkable expedition. Many instances are cited where freight shipments have been sent through from Washington and vicinity to the Texas border in four days, and from New York and vicinity in five days or less; freight from Philadelphia, Pa., has reached San Antonio, Tex., in 79 hours, from the Lakes to the border shipments have been made in an elapsed time of a little more than 48 hours.

The hearty cooperation of the railroads in making these shipments has been rendered without any hesitation whatever, with all the energy possible, and without additional charge to the Government.

It is believed that this simple device, with the fullest cooperation of the railroads, has removed one of the principal sources of criticism applicable to the period of mobilization in 1898.

Where special, urgent shipments have been made they have been followed through by wire to destination and most satisfactory results have been obtained in every instance.

As a specific example showing how the cooperation of the railroad companies assisted the Army, there may be cited the case of the first motor truck company purchased for the expeditionary forces in Mexico.

Bids were invited for a number of trucks, and award made about 5 o'clock the evening of March 14. Twenty-seven trucks were purchased under this advertisement in Wisconsin. These trucks were inspected, the personnel to operate them employed, the trucks were loaded in 14 cars, and tourist car furnished for the personnel, and the train left at 3.11 a. m. March 16. It arrived at Columbus, N. Mex., 1,591 miles away, shortly after noon on the 18th, the trucks were unloaded from the cars, loaded with supplies, and sent across the border, reaching Gen. Pershing's command with adequate supplies of food before he had exhausted the supplies taken with him from Columbus.

In a little more than four days after orders were placed with the manufacturers, these trucks had gone across the border at Columbus, 1,600 miles away from the factory, loaded with supplies.

The general plan of cooperation also provided for coordinating the duties of the Pullman Co. in furnishing sleeping car equipment, and under this plan when it became necessary to mobilize the Organized Militia the supply and distribution of tourist sleeping cars was handled directly under the instructions of the Quartermaster General of the Army. In order to centralize the furnishing of tourist sleepers at the point most convenient to the Government, to utilize the available supply of these cars to the best advantage, and to keep them constantly in service, the Pullman Co. changed the supervision of the supply and movement of these cars from the headquarters of the company, at Chicago, to Washington, where they stationed Mr. C. W. Henry, assistant to superintendent of car service, with a competent force. Mr. Henry was in immediate touch with the office of the Quartermaster General, and on receipt of request from camp quartermasters for tourist cars, he was advised of the needs and at once took steps to supply the cars if they were available at any point. Reports were received by him daily from all parts of the United States showing the number of tourist cars that were available in all sections of the country and in cases when, on account of the necessity for immediate departure, it was impossible to furnish cars from the starting point, this branch of the Pullman Co. used every effort to furnish the cars

en route, immediately starting such cars as could be secured over the route to be taken by the troops, so that they could be transferred to tourist sleeping cars at the first possible opportunity. During the first two weeks of the concentration this force was on duty until nearly midnight every day, including Sundays, and deserves great credit for the excellent assistance rendered the Government.

The great value of the plans made for cooperation and coordination between the railroads and the War Department was fully demonstrated in the mobilization and concentration of the Organized Militia. Every assistance possible was rendered the Government, not only by the American Railway Association and the Pullman Co. but by the various passenger associations, and by the officials and employees of all the railroads concerned, from the presidents of the companies down to the minor employees. In addition to the representative of the American Railway Association, nearly all the important Southwestern railway lines had representatives in Washington during the entire movement, and these representatives kept in close touch with the transportation over their respective lines, and were available for consultation at any time, if desired by the department. The cooperation of the American Railway Association representatives, with their expert knowledge of transportation conditions, has proved of great value to the department, and quartermasters have been relieved of a great deal of trouble and annoyance heretofore experienced in the mobilization of large bodies of troops.

It is believed that the careful plan of cooperation adopted and the assistance of the transportation interests in this plan has demonstrated that the problem of rail congestion, which was the bugaboo of the mobilization of troops in 1898, has been entirely eliminated.

The arrangements entered into with railway lines in eastern and western territory, as referred to in the Annual Report of the Quartermaster General for 1915, pages 50 and 51, were continued during the fiscal year 1916, and resulted in a saving of approximately \$40,000 on passenger traffic. Negotiations are now under way with lines in New England and Southeastern territory on a similar basis with every prospect of a successful conclusion; this arrangement will then cover the entire United States. Briefly, it provides for a deduction of 5 per cent from the usual fare available to the Government and for an equitable distribution of the traffic between all lines interested, it simplifies the settlement of accounts, and insures the cooperation of the various carriers.

Transportation of Regular Army organizations to the Mexican border.—During the latter half of the fiscal year 1916 conditions on the Mexican border were such that it became necessary to augment the troops stationed along that frontier, and the following movements of Regular Army organizations were ordered on the dates indicated.

March 11, 1916, First, Eleventh, and 2 squadrons Twelfth Cavalry.

March 20, Fifth Cavalry.

May 9, Third, Twenty-first, Thirtieth, and 2 battalions, Fourteenth Infantry, First battalion Third Field Artillery, and 21 companies Coast Artillery.

June 11, First battalion Engineers.

The transportation of these organizations was accomplished in an excellent manner, in exceptionally good time, and without any accidents of any nature.

Mobilization of the Organized Militia and National Guard.—On May 9 the President called into the service of the United States the organizations of the Organized Militia and the National Guard of the States of Arizona, New Mexico, and Texas. These organizations were not mobilized at their State mobilization camps, but directed to proceed from their home rendezvous direct to the border.

On June 18, 1916, the Organized Militia and the National Guard of all the other States of the Union were called into the service of the United States and directed to assemble at their State mobilization camps. The movement from the company rendezvous to the State mobilization camp was under the control of the State authorities, and from these camps to the station designated on the border was under direction of the War Department.

Immediately on receipt of the order for this mobilization, routing schedules prepared in the office of the Quartermaster General were furnished to the quartermaster at each of the four department headquarters; these schedules indicated the routing to be used by each organization from the State mobilization camp to the Mexican border, 288 routes being shown, and were arranged with a view to an expeditious movement, employing all available lines, as far as practicable, so that if it had become necessary to transport all the militia at one time the carriers could have performed the service without congestion and without delay.

A Handbook on Transportation by Rail, issued by the Quartermaster General of the Army, was sent to each mobilization camp immediately after orders were issued for the mobilization of the State troops.

This handbook, among other matters, consolidates the information showing the manner and extent to which standard sleepers, tourist sleepers, and coaches shall be furnished under existing regulations for troops traveling; it provides for the methods to be used to secure an adequate supply of drinking water for the troops, and contains full instructions as to the installation of Army field ranges in baggage or box cars, so that hot coffee and hot meals may be furnished en route. It also exhibits the details of assembling and loading of equipment, and the entraining and detraining of the men and animals.

The militia troops began leaving their mobilization camps for the Mexican border about midnight June 26, the first organization to leave its camp for the border being Battery B of the New Jersey Field Artillery, which departed from Sea Girt, N. J., at 11.30 p. m., June 26, but was closely followed by the Ninth Massachusetts Infantry, which left its camp at Framingham at 12.28 a. m. June 27. Other organizations from Massachusetts and New Jersey also left the State mobilization camp for the border on June 27, as well as organizations from Connecticut, New York, Oregon, Utah, and Vermont. On July 1 there were en route to the border from various sections of the United States 122 troop trains, carrying over 2,000 freight, passenger, and baggage cars, with a total strength of 36,042 men. On July 4 101 troop trains were en route to the border and 52,681 militia troops (not including Arizona, New Mexico, and Texas) were either at the border or en route thereto.

From the beginning of the movement up to July 31, 1916, there have been 111,919 militia troops transported to the border, as shown by Exhibit 13.

Some idea of the task imposed upon the railroads of the country by the transportation of the National Guard may be had when it is considered that 350 trains were necessary to carry the first 100,000 of the National Guard and that these trains, if combined, would have made a train nearly 90 miles long. Over 3,000 passenger cars, including standard Pullman and tourists and coaches, were provided for the troops, and in addition about 400 baggage cars, most of which were equipped as kitchen cars for serving hot meals en route, 1,300 box cars, 2,000 stock cars, and 800 flat cars were used in transporting the equipment and materiel of the troops. An enormous number of locomotives were required in these movements, as will be realized when it is remembered that at each division point a different locomotive, with crew, was attached to each train section, and the number of division points at which it was necessary to change locomotives varied from three, in the case of the Louisiana troops, to 24, in the case of the Connecticut troops. There were employed in the movement of the first 100,000 of these troops approximately 4,900 engines and crews, not including switching engines, yard engines, and their crews.

The call upon the railroads for the transportation of the militia came at a time when their passenger traffic was at its height. In the fortnight which includes the Fourth of July the greatest density of travel of the entire year always occurs in the Eastern States.

Instructions were issued by all railroads concerned that the movements of troop trains were to be given preference over other travel, and it is believed that this was done in all cases. Many of the western roads being single-track lines, it was, in some cases, necessary for the troop train to take the siding in order that a train proceeding in the opposite direction could pass, but this action is sometimes necessary on these roads with even the fastest limited trains. The following wire received from one of the southwestern railroads is characteristic:

Instructions have been issued to all concerned that all military trains are to be given right of way. Sunshine Limited was sidetracked last night for the first time in its history. We are doing everything possible to facilitate the handling of this business.

It is, of course, impossible to compare the concentration of the United States Militia on the Mexican border with the mobilization in Europe in the summer of 1914. In Europe all civil traffic was stopped and the entire railroad system given over to the military movement. The distances involved in this movement of the Organized Militia are very much greater than those in Europe, the longest run in the German Empire, from one frontier to the other, being about 700 miles and those in France much less. The distances traveled by the militia organizations of the United States vary from 608 miles, in the case of the Louisiana troops, to 2,916 miles in the case of the Connecticut troops. The majority of these troops came from North and Northeastern States and were carried over 2,000 miles; in most cases in remarkably fast time. As an example, the Seventh New York Infantry, about 1,400 men, with equipment, ammunition, and baggage, left New York at 2 p. m. June 27, and

arrived at San Antonio, Tex., 8.30 p. m. June 30, a distance of 2,087 miles. Similar runs on time almost as fast were made from other points.

When it is considered that these trains were, as a rule, heavy trains of from 17 to 22 cars each, and were composed of freight, passenger, and baggage equipment (which was necessary in order to enable each unit to proceed to its destination intact with all its equipment and impedimenta), it will be seen that the movement was made with exceptional rapidity.

To have effected the entire movement of all the troops moving in tourist sleepers would have required the use of approximately 3,000 cars; in other words, approximately five times as many as there are in existence. The Pullman Co., by utilizing some standard cars, made available for the movement of these troops 623 tourist cars. Tourist equipment was furnished troops from the beginning of the movement whenever it was possible to do so.

Particular attention is invited to the fact that the effort to furnish tourist cars for organizations leaving in coaches did not cease until the organizations had actually arrived at destination, and that wherever tourists could be secured en route they were placed in the train and the men transferred from coaches to these tourists up to the number that could be suitably berthed. Taking as an example some of the New York organizations: Headquarters, band, and Battery A, First Field Artillery, left Yonkers, N. Y., for Brownsville, Tex., on July 3, requiring four tourists. There was only one available at starting point, but the organization was furnished one at Poughkeepsie, N. Y., one at Buffalo, N. Y., and one at Sapulpa, Okla. The Seventy-fourth New York Infantry, leaving Buffalo, N. Y., on July 5, required 25 tourists, but none were available at Buffalo, Chicago, or Kansas City. Four were furnished at Herrington, Kans., 13 at Caldwell, Kans., 3 at El Reno, Okla., and 5 at Fort Worth, Tex. These two examples are fair illustrations of the efforts made to furnish tourists for these organizations wherever they could be secured. In other words, the department did not lose track of organizations, but continued to serve these organizations in the above manner and to follow them until their arrival at destination.

In cases where tourist cars could not be furnished, day coaches were supplied by the railroads at the rate of one double seat for each man where the distance was long. In some instances day coaches were supplied at the rate of four seats for each three men for at least a portion of the journey; this the railroads considered necessary, due to the fact that at the beginning of the mobilization it was anticipated that movements would be kept up in the same intensity throughout this concentration as in the first 48 hours, in which case the railroad equipment necessary could only have been obtained by annulling many of the most important trains of the railroads and using the equipment therefrom for the movement of troops. The railroads, in case of necessity, were prepared to proceed to this extremity. In all cases, where it was possible to do so, tourist equipment for the entire movement was furnished, but where not immediately available the troops were met en route and transferred to tourists in every possible case. This proved to be a wise method, inasmuch as it kept all tourist equipment in constant use.

Official reports from all military departments show that no organization moved in coaches with less space than three men to every four seats, and wherever equipment was available the railroads furnished two seats for each man. The total number of men transported in coaches showed an average of 30 men to each coach.

With all this large number of persons transported in special trains, on special schedules, but one accident involving any injury to the men was reported. This occurred to a train of the First Minnesota Field Artillery, due to a collision with a commercial train, in which three men were injured—two of them slightly and one seriously but not dangerously—and with this exception the transportation of the militia was accomplished without accident.

Although the movement of the Organized Militia to the border came at a time when the commercial traffic on railroads of the United States was the largest in years, the transportation of the militia was performed with very little interference with regular train service and with no congestion whatever, either at initial or terminal points or en route. As an example, there moved into the Brownsville district during the month of July, 1916, 106 special trains, composed of 1,216 cars of passengers and 1,201 cars of freight for the Army, a total of 2,417 cars, in addition to 680 cars of Army supplies handled in freight trains and the usual commercial traffic. This district is reached only by one single-track railroad line, and all rolling stock had to be returned over the same line. The cars were unloaded at once and hauled back and there was at no time any delay in unloading nor was there any congestion.

Considering the great distances traveled by the militia from the various camps to the Mexican border, the fact that there was but a single accident, and that of a minor character, the celerity with which the trains were moved and the entire absence of congestion or delay, it is believed there has been no case in history where troops have been as well and safely transported or as well cared for while en route as in the recent mobilization.

Drayage and hauling.—During the fiscal year 1916 the cost of drayage, cartage, and hauling was \$69,256.47, as shown below:

Drayage at posts.....	\$44, 633. 19
Drayage at depots and arsenals.....	24, 623. 28
Total.....	69, 256. 47

The bulk of the expenditures for hauling at posts is incurred at posts in Alaska and the Canal Zone, where owned means of transportation is insufficient; at Coast Artillery posts in the United States that are situated on islands, necessitating hauling from railroad stations to docks; and at some of the western posts that are situated a considerable distance from railroad, such as Fort Apache, Ariz., and Fort Clark, Tex. The approximate division of the amount shown above is as follows:

Alaska.....	\$16, 000	Interior western posts.....	\$12, 000
Canal Zone.....	5, 000	Miscellaneous posts.....	3, 000
Coast Artillery posts.....	8, 000		

The drayage at depots is incurred at cities where owned means of transportation is either unavailable or insufficient.

Transportation accounts acted on.—During the fiscal year 1916 a total of 1,442 transportation accounts, aggregating \$203,930.69, were re-

ceived and acted on in the transportation division, office of the Quartermaster General, as shown below:

Accounts payable from appropriations pertaining to other bureaus of the War Department (699).....	\$64, 885. 33
Disputed accounts payable from appropriation "Supplies, Services, and Transportation" (743).....	139, 045. 36

The accounts prepared by the disbursing officers of the Quartermaster Corps, covering transportation payable by other departments of the Government, are forwarded direct to such departments for payment. The accounts paid by the disbursing officers from appropriation "Supplies, Services, and Transportation" are not received in the transportation division, but pass through the finance and accounting division to the Auditor for the War Department, the 743 accounts referred to above being those in which disputes have arisen as to the proper basis of settlement.

The four offices of the Quartermaster Corps charged with the settlement of transportation accounts during the fiscal year 1916 paid transportation accounts in which were included a total of 76,353 transportation requests and 72,849 bills of lading.

Motor transportation.—The first motor truck for carrying supplies was procured by the Quartermaster's Department in June, 1907, since which time the Quartermaster's Department has made constant progress in developing the motor truck as a means of transportation. Appropriations for this purpose, until recently, have been very limited. The progress of development, however, considering these circumstances, has been very satisfactory. The Quartermaster's Department first took up the matter of operating trucks seriously in 1911, and extensive experiments and observations have been made annually since that time. Near the close of the fiscal year 1916, however, extensive opportunities were afforded for determining the value of motor transportation under severe conditions in connection with the operations in Mexico and along the Mexican frontier.

The first specifications of the Quartermaster's Corps were written in 1913, after extensive correspondence with manufacturers and the Society of Automobile Engineers. These specifications have been revised and brought up to date annually. The revision of 1916 was carefully prepared in consultation with the Society of Automobile Engineers, which has given this department valuable and much appreciated assistance in solving the problems of motor transportation.

In this connection it may be stated that it is very difficult for motor-truck manufacturers to immediately effect changes to conform to the requirements of military trucks, for the reason that orders for materials are placed many months in advance of the time when it is required to enter into the manufacture of trucks.

During the early part of the fiscal year 1916 motor transportation was confined to operation of motor trucks in connection with the transportation of supplies between base depots and outlying camps on the Mexican border, in connection with the operation of Quartermaster Corps depots, and at a few posts in the United States and over-sea possessions where motor transportation could be installed at a saving over animal-drawn transportation. By careful observations and such experiments as could be undertaken with the limited funds appropriated for procurement of motor transportation experience of great value was obtained, demonstrating that motor transportation can be relied

upon under severe road conditions. Tentative organizations and regulations for all motor units, repair shops, and subsidiaries were prepared in the office of the Quartermaster General and distributed to those charged with handling these units, so that necessary steps were taken, so far as it was possible for this office to do so, under these new conditions.

When instructions were given for the organization of an adequate military force of troops to cross the Mexican border in pursuit of the Mexican band which attacked the town of Columbus, N. Mex., and troops there on the morning of March 9, 1916, this office was in position to take immediate steps to procure necessary motor transportation which it was foreseen would be required. On March 11, 1916, the first call was received from the Southern Department for two motor-truck companies, consisting of 27 motor trucks each, of 1½ tons capacity, equipped with necessary personnel for their operation. As soon as the approval of the Secretary of War was received these trucks were purchased and provided with the necessary personnel, hired at the factories at which the trucks were manufactured. The personnel conformed to the organization above referred to. The two motor-truck companies first ordered left the region of the Great Lakes at 12 o'clock midnight, March 15, and early on the morning of March 16. Both were sent by special-train service to Columbus, N. Mex. Two additional truck companies followed soon thereafter, as well as the necessary tank trucks for carrying gasoline, oil, and water.

It was soon found that motorcycles which originally accompanied these truck companies for carrying a certain portion of the personnel were unsatisfactory in operation over the heavy sandy country in Mexico where no made roads exist. Upon the recommendation of the local authorities light automobiles of the roadster type were substituted for use of motor-truck company commanders and truckmasters in lieu of motorcycles and have been found more satisfactory.

One of the most important features in connection with the operation of motor trucks is that they be equipped with a strong and suitable body. This is especially necessary where the roads over which they operate are rough and uneven. The body should be specially constructed and suitable for the work for which intended. Whilst the heavy body provided for in the specifications of the Quartermaster Corps adds materially to the weight of the truck, it more than makes up by its longevity and carrying capacity.

As the experience of the department becomes more extensive in the operation of motor trucks under the extremely severe conditions to be found in the operations in Mexico, many defects developed in some of the trucks in use; some of them of minor character, which could be easily corrected; others of a much more serious character. In general, however, it may be stated that the provisions of the specifications issued by this department were found to be based on correct principles for the service for which these trucks were intended.

The department has been greatly assisted by representatives of various truck manufacturers in the study of defects and recommendations for improvement in the motor transportation now in operation. By the end of the fiscal year 10 motor-truck companies, each consisting of 27 motor trucks of 1½ tons capacity, 6 motor-truck companies consisting of 28 motor trucks of 3 tons capacity, and 2 motor-truck companies each consisting of 33 motor trucks of 3 tons capacity

had been purchased and were in operation along the Mexican border or en route to that point to be placed in operation. Of the above truck companies, 10 companies of 1½-ton trucks and 2 companies of 3-ton trucks were in operation on the line of communications which extended from Columbus, N. Mex., to San Antonio, Mexico, 301 miles from Columbus.

Upon the recommendation of the department authorities, Southern Department, a proportion of 3-ton trucks were supplied for use on the line of communications into Mexico, and at certain points along the Mexican border. At present there are 8 companies of 3-ton trucks in service in connection with troops operating in the Southern Department. Reports received up to this time indicate that these trucks are satisfactory in dry weather, but it is reported that during the rainy season the lighter trucks of 1½ tons capacity are more reliable.

From reports received it would appear that these truck companies were averaging somewhat more than 60 miles per day, in many instances as high as 80 to 90 miles per day, but due, however, to constant travel, the roads are reported to have become almost impassable. Steps were taken early in these operations to provide road machinery for necessary repairs to the roads. This work was done by the Engineer Department with funds and machinery furnished by the Quartermaster Corps.

From the time that the expedition went into Mexico to June 30, 1916, there were purchased for use on the Mexican border and with the expedition into Mexico 588 motor trucks; 57 motor tank trucks for carrying water, oil, and gasoline; 10 motor machine-shop trucks for repairing motor transportation in transit; 6 motor wrecking trucks; 75 automobiles; 61 motorcycles; and 8 tractors for repairing roads, miscellaneous road machinery, repair parts, and equipment, amounting to \$2,175,670.09.

The policy pursued in furnishing transportation for operations in Mexico and in connection with the troops on the Mexican border was to furnish only such makes of trucks as had been tried out under the severe service conditions prevailing in Mexico and on the border and had proven satisfactory to a committee appointed by the department authorities. All motor-truck manufacturers applying were given authority to place their trucks on the line of communications at Columbus, N. Mex., for demonstration and test. The operations of these trucks were carefully observed, and upon their performance on the line of communications subsequent purchases were made.

The commanding general, Southern Department, states that "All motor-truck manufacturers agree, without exception, that their service on our line of communications from Columbus, N. Mex., south into Mexico was the hardest test of motor-truck transportation they have ever known, and no make of truck was purchased for this service that was not first tested out on our line of communications and recommended as satisfactory by officers who actually tested out these machines on the line."

In this way it is believed that the Government has secured the best makes of motor-truck transportation for this severe class of service that can be procured in this country. Motor-truck manufacturers have expressed themselves as being well pleased to have been afforded an opportunity of testing out their trucks, even in cases where trucks have not proven satisfactory for the service, inasmuch as it discloses

the nature of the weaknesses of such truck and led manufacturers to modify and improve their trucks for this class of service. It is realized by them that the truck best suited for the military service is also best suited for use of the average farmer over ordinary country roads and across fields.

The commanding general, Southern Department, reports that the approximate cost of operation of trucks per ton-mile is \$0.70, which includes all incidentals, such as upkeep of repair shops, roads, etc.

Among officers of experience with motor trucks it is known and realized that speed is the greatest menace to the successful operation of trucks. It is the hardest thing to control and causes more expense than all other things combined in connection with the handling of motor trucks. Many officers of the Army are now getting valuable experience and gaining a considerable knowledge of motor-truck transportation, and no doubt in the future will be able to handle such problems better than they have in past, and all of them will realize that care is essential in the handling of this class of transportation.

The commanding general, Southern Department, states that, due to the necessity of quartermasters devoting their time to the supply situation on the Mexican border, it was impossible to obtain full reports with reference to the operation of motor transportation in the Southern Department; therefore complete data with reference to operating expenses of the various kinds of motor vehicles during the fiscal year 1916 must be included in the report which will be rendered for the fiscal year 1917.

This office is continuing its efforts in conjunction with the Society of Automobile Engineers, manufacturers, and Government departments in developing our present specifications, with a view to making such changes as will adequately meet the requirements of the Government and which it is felt will eventually harmonize to a greater extent than has been expected heretofore with the needs of private users of commercial motor vehicles. Some well-qualified experts feel that within two or three years the commercial product will approximate what, according to the best opinion, will be suitable for operation in all except special cases of Government service.

Trailers.—During the fiscal year eleven 2½ to 3 ton and one 1½-ton trailers were purchased for use in connection with the operation of motor transportation on the Mexican border, costing \$8,023.50.

So far trailers have not proven satisfactory. It is not believed that they can be generally utilized in divisional trains, though in certain instances it may be found practicable to use them on the line of communications.

Road machinery.—The following road-making machinery was purchased during the fiscal year for use in connection with the repair of roads into Mexico:

Number.	Articles.	Cost.	Number.	Articles.	Cost.
3	Holt tractors.....	\$14,250	18	Coupling poles.....	\$180
2	Phoenix tractors.....	8,900	3	Russell graders.....	2,724
2	Knox tractors.....	10,200	3	Austin graders.....	1,485
1	Buckeye tractor.....	4,800	4	Acme scrapers.....	632
3	Monarch road rollers.....	4,950		Tractor parts.....	600
3	Indian steel drags.....	105			
18	Watson dump trailers.....	2,160		Total.....	51,033
4	Tractor poles.....	47			

Issues to the militia.—Supplies to the value of \$275,059.75 were issued by the transportation division to the Organized Militia during the fiscal year under authority of statutes providing for such issues, as follows:

Items.	Number.	Cost.	Items.	Number.	Cost.
Ambulances, horse-drawn.....	37	\$8,399.00	Oats.....pounds..	1,479,811	\$24,532.68
Harness, lead, s. s.....	2,126	41,356.85	Hay.....do....	1,728,544	15,904.50
Harness, wheel, s. s.....	1,838	42,500.00	Bran.....do....	36,023	471.42
Saddles, riding.....	12	336.00	Bedding.....do....	386,547	1,991.97
Wagons, escort.....	921	118,780.50	Total.....	3,630,925	42,900.57
Miscellaneous articles.....		20,786.83			
Total.....	4,934	232,159.18			

No gratuitous issues of such supplies were made to the Organized Militia of the District of Columbia.

Forage.—The expenditures during the fiscal year for forage for animals pertaining to the Army amounted to \$3,563,251.15. This includes the forage used in the Philippine Islands, Alaska, Hawaiian Islands, Porto Rico, and the Panama Canal Zone, except native grass and bedding purchased in the Philippine Islands. In addition to the above there was purchased 127,179 pounds of dog food at a cost of \$8,237.60.

Quantities and cost of forage and bedding purchased during the fiscal year 1916, except that purchased for the Philippine Islands:

Kind.	Pounds.	Total cost.	Average cost.
Oats.....	108,152,997	\$1,979,596.86	\$1.8304
Hay.....	140,198,528	999,733.42	.7131
Bran.....	2,674,662	34,732.72	1.2908
Corn.....	1,008,189	20,253.52	2.008
Barley.....	2,262,274	28,915.21	1.28
Shiverick compressed forage.....	71,400	1,963.50	2.75
Bedding.....	23,043,885	112,825.87	.4896
Peat moss.....	8,995	80.05	.889
Dog food.....	127,179	8,237.60	6.39
Total.....	277,548,107	3,186,338.75	.....
Total forage and bedding purchased (except for the Philippines and exclusive of dog food).....	277,420,928	3,178,101.15	.....

Of the above supplies the following were shipped to Alaska, Porto Rico, Panama Canal Zone, and the Hawaiian Islands:

	Pounds.	Cost.		Pounds.	Cost.
ALASKA.			PANAMA CANAL ZONE.		
Oats.....	504,149	\$7,652.04	Oats.....	407,520	\$10,841.82
Hay.....	1,013,544	8,372.59	Hay.....	639,483	7,827.25
Corn.....	10,000	176.00	Bran.....	9,500	131.67
Barley.....	140,000	1,806.00	Bedding.....	127,710	883.49
Bran.....	24,990	320.97	Total.....	1,184,213	19,689.23
Bedding.....	240,900	1,089.45			
Dog food.....	127,179	8,237.60	HAWAIIAN ISLANDS.		
Total.....	2,060,762	27,654.65	Oats.....	10,600,000	146,741.96
PORTO RICO.			Hay.....	14,822,117	123,603.96
Oats.....	487,885	11,005.34	Bran.....	220,000	2,722.50
Hay.....	720,509	9,722.50	Total.....	25,642,117	273,068.42
Bran.....	51,951	993.55			
Bedding.....	128,838	1,488.05			
Total.....	1,392,183	23,208.44			

Of the above supplies the following were purchased in the Hawaiian Islands:

	Pounds.	Cost.
Hay.....	1,000	\$10.00
Bedding.....	2,413,050	16,069.36
Total.....	2,414,050	16,079.36

The following quantities of forage were purchased for shipment to the Philippine Islands during the fiscal year 1916:

	Pounds.	Cost.
Oats.....	14,000,000	\$180,950.00
Hay.....	24,000,000	204,200.00
Total.....	38,000,000	385,150.00

The following forage was purchased in the Philippine Islands during the fiscal year 1916:

	Pounds.	Cost.	Average cost.
Green forage.....	8,351,200	\$21,559.16	\$0.259
Bedding.....	2,486,000	6,446.20	.26
Total.....	10,837,200	28,005.36	.....

The matter of amending contracts for forage so as to permit contractors to supply grades of hay and grain as fixed by the grain associations and chambers of commerce was considered. It was represented that the peculiar conditions existing in various sections made it difficult for inspecting officers to accept forage that would comply in all respects with the specifications. The Department of Agriculture was consulted, as that department had assisted in the preparation of the specifications in use by this department, and it was concluded that contractors should have no difficulty in meeting the requirements called for in regular specifications. No change was therefore authorized, except that a modification so that oats which were clean and practically free from other grains could be accepted. No change was authorized in the specifications for hay.

Compressed forage.—An extended test was begun in the Eastern Department of compressed forage with a view to determining if it will be possible either to definitely adopt this ration for certain conditions of field service, or to suggest such minor changes as experience may indicate to be necessary. A quantity of compressed forage was purchased and issued to posts in the Eastern Department, but owing to the withdrawal of troops for service on the Mexican border before the test could be concluded, no definite conclusion was reached as to its value. A test on the Mexican border under service conditions has been ordered, and this test should decide if there are any merits in this type of forage.

Forage shipped to the Philippine Islands.—Oats and grain hay sent to the Philippine Islands from the United States during the fiscal year have been of good quality and sufficient at all times.

Remount service.—Animals purchased by the Quartermaster Corps during fiscal year 1916:

Kind.	Number.	Total cost.	Average cost.	
			1916	1915
Cavalry horses.....	8,733	\$1,299,890.79	\$148.85	\$146.00
Artillery horses.....	2,255	371,265.08	164.64	150.15
Riding horses.....	137	20,114.14	146.82	152.11
Young horses.....	2,329	320,574.92	137.64	134.46
Draft horses.....	6	1,470.00	245.00	218.24
Bell horses.....	2	200.00	100.00	.....
Draft mules.....	2,509	519,288.25	203.38	184.55
Pack mules.....	1,434	189,451.50	132.11	140.13
Dogs.....	28	1,400.00	50.00	51.53

The average cost of mounts for the year is \$149.53 per head.

During the year 1,530 animals were condemned, sold, etc.; 437 died; a total of 1,967. There remained on hand June 30, 1916, in the United States, Hawaii, and Panama, excluding animals at remount depots:

Cavalry horses.....	12,613	Pack mules.....	2,073
Artillery horses.....	3,715	Riding mules.....	539
Riding horses.....	2,042	Dogs.....	121
Draft horses.....	930		
Bell horses.....	27	Total.....	28,814
Draft mules.....	6,754		

	Horses.	Mules.
Fort Keogh Remount Depot, Fort Keogh, Mont.:		
Animals on hand July 1, 1915.....	893	6
Animals received during the fiscal year 1916.....	2,075	.....
• Total on hand and received.....	2,968	6
Issued during the year—		
Cavalry horses.....	999	
Artillery horses.....	164	
Riding horses.....	5	
Horses sold to officers.....	1	
Horses died.....	62	
Horses otherwise disposed of.....	4	
Total disposed of.....	1,235	.....
Balance on hand June 30, 1916.....	1,733	6
Fort Reno Remount Depot, Fort Reno, Okla.:		
Animals on hand July 1, 1915.....	992	241
Animals received during the fiscal year 1916.....	3,215	.....
Total on hand and received.....	4,207	241
Issued during the year—		
Cavalry horses.....	1,956	
Artillery horses.....	383	
Riding horses.....	67	
Horses sold to officers.....	20	
Horses died.....	62	
Horses otherwise disposed of.....	17	
Total disposed of.....	2,514	.....
Mules issued.....	232	
Mules otherwise disposed of.....	1	
Total disposed of.....		233
Balance on hand June 30, 1916.....	1,693	8

	Horses.	Mules.
Front Royal Remount Depot, Front Royal, Va.:		
Animals on hand July 1, 1915.....	448	34
Animals received during the fiscal year 1916.....	1,104	.....
Total on hand and received.....	1,552	34
Issued during the year—		
Cavalry horses.....	535	
Artillery horses.....	199	
Riding horses.....	14	
Draft horses.....	2	
Horses sold to officers.....	34	
Horses died.....	24	
Total disposed of.....	808	.....
Mules issued.....	.....	1
Balance on hand June 30, 1916.....	744	33
Summary of remount depots:		
Animals on hand July 1, 1915.....	2,333	281
Animals received during fiscal year 1916.....	6,394	.....
Total on hand and received.....	8,727	281
Issued during the year—		
Cavalry horses.....	3,490	
Artillery horses.....	746	
Riding horses.....	86	
Draft horses.....	2	
Horses sold to officers.....	64	
Horses died.....	148	
Horses otherwise disposed of.....	21	
Total disposed of.....	4,557	.....
Mules issued.....	233	
Mules otherwise disposed of.....	1	
Total disposed of.....	.....	234
Balance on hand June 30, 1916.....	4,170	47

The number of horses that passed through the Army remount depots during fiscal year 1916 was much greater than the number that were handled during fiscal year 1915, as shown by the following comparative table:

	Fiscal year 1916.	Fiscal year 1915.	Increase in 1916 over 1915.
Received at remount depots.....	6,394	2,399	3,995
Issued from remount depots.....	4,557	1,964	2,593
On hand at remount depots.....	4,170	2,333	1,837

The quality of horses purchased during the past fiscal year showed a marked improvement over those bought previously, due, in part, to the stallions provided by the Department of Agriculture, and to the better knowledge that farmers and breeders have of the type of horses desired, as the result of coming in contact with the remount officers who can advise them as to the type of animals required by the Army. However, the breeding of suitable horses for military purposes could be greatly improved and their number increased if the appropriations were increased so as to enable the Department of Agriculture to purchase additional stallions and extend the present plan of breeding.

Foreign Governments have purchased and exported thousands of mature horses out of the country. This has reduced the horse stock considerably in the United States and has increased the prices of

mature horses. However, it is not thought that the shortage in mature horses will materially affect the supply of animals needed by the Regular Army during peace time, for the reason that a sufficient number of young horses can be obtained and handled through the remount depots to meet the normal requirements of the Army.

In March, 1916, two auxiliary remount depots were established—one at El Paso, Tex., and the other at Fort Sam Houston, Tex.—for the purpose of providing the necessary means of maintaining the animals of the forces along the border in good condition. These are the important reservoirs from which animals are drawn for the equipment of new troops and to replace those that are lost or become unfit for service from any cause. At these points hospitals have also been established, to which animals are withdrawn from the service when they become sick or, from long continuous service, require recuperation.

Reports indicate that horses shipped from the remount depots at Fort Keogh, Reno, and Front Royal to troops on the border and elsewhere arrived in good condition. On May 16, 1916, the depot quartermaster, El Paso, Tex., stated that horses shipped to that depot from the Fort Keogh remount depot were received in excellent condition; that no horses were sick, none appeared to be gaunted, and that the condition of the horses was so fine that his veterinarian was most enthusiastic about them, remarking while they were being unloaded, "This, from a standpoint of condition, is the best shipment we have received and appear ready to go to work at once."

On the other hand, a good deal of sickness and a number of deaths were reported among mature horses purchased under contract and shipped to the Mexican border, due to the shipping fever contracted in passing through stock yards. These animals had to be quarantined for several weeks and doctored before they became fit for issue to troops.

In a report received from the authorities in the Southern Department, they state that the wisdom of issuing green animals to organizations to bring to the border with them immediately is seriously doubted; that about 150 deaths have been reported in the New York division at McAllen, Tex., and a board of mounted officers has reported as follows: "The board on mortality among public animals at McAllen considers that mortality is not abnormal in view of conditions of mobilization. Losses mostly occurred amongst horses purchased for the emergency, of which nearly all were sick when received by organizations and many sick when entrained."

The prudence of handling as many horses as possible through the Army remount depot is apparent.

Fort Keogh remount depot.—In the fiscal year 1916 the exterior painting of all buildings around the parade and on entrance road has been completed by the use of depot labor and material secured under the annual apportionment for repair.

An interior and exterior electric lighting system was installed at a cost of \$2,266.20, current being purchased from Miles City.

Four grooming machines, electrically driven, were installed at a cost of \$839.52, which will permit the thorough grooming of all horses being trained, an important training factor, which, without this equipment, has necessarily been less thoroughly done.

A steam heating plant was installed in the commanding officer's quarters by depot labor at a cost of \$617.19 for apparatus.

A tank of 8,000 gallons capacity was installed by depot labor at a cost of \$395.95, for storage of fuel oil for power farm machinery. This enables the depot to receive the oil in car lots at about half the cost of other methods.

Three windmills were installed at a cost of \$217.50 at artesian wells in pastures. They will provide water continually and the overflow from the troughs will fill holes and furnish water at all times for animals in pasture. To accomplish this heretofore it has been necessary to use several men with gas engines.

Two 30-60 oil pull tractors, each with gang plows, were purchased at a total cost of \$6,171.40. They were necessary to carry the farming operations beyond the acreage of 1915.

The pasture area remained unchanged—about 35,000 acres. The area cultivated in 1916 was 1,625 acres, as against 1,275 acres in 1915. It is proposed to break about 300 acres of new land in the fiscal year 1917, only to fallow an equal amount now cultivated, as the total of about 1,600 acres is all that can be handled with the present personnel and existing irrigation plant.

Forage grown during fiscal year 1916:

Oats, 1,750,000 pounds.

Hay { 500,000 pounds (alfalfa).
450,000 pounds (blue joint).

Straw, 2,000,000 pounds.

Approximate value of above forage, \$40,000.

Forage grown during fiscal year 1915:

Oats, 116,250 pounds.

Hay { 43,300 pounds (alfalfa).
21,750 pounds (timothy).

Straw, 296,390 pounds.

Approximate value of above forage, \$3,270.

Front Royal remount depot.—During the fiscal year the following progress has been made in improving the depot:

Buildings completed and received from contractor:

3 colt stables.	1 coal storage (bunker).
1 granary and hay shed.	1 oil house.
3 civilian quarters.	1 dispensary.
1 barracks.	1 set double noncommissioned officers' quarters.
1 administration building.	1 veterinary ward.
1 quartermaster stable.	1 fire station.
1 farm implement shed.	1 granary office.
10 isolated quarters for enlisted men.	10 sheds.

Roads constructed:

Macadam road from main gate to officers' quarters.

Macadam road from officers' quarters to administration building.

Roads to feeding sheds repaired.

All feed sheds have been repaired.

200 trees have been planted at depot.

500 rods interior fencing completed.

About 100 acres of land were under cultivation in 1916, compared to 45 acres in 1915. It is contemplated to break up such land as it is possible to farm where briars, locust, etc., have ruined the turf—from 100 to 150 acres.

Forage raised during the fiscal year:	Value.
140,000 pounds hay.....	\$1, 386. 00
540 bushels rye.....	513. 00
28,000 pounds corn.....	280. 00
32,450 pounds straw.....	145. 22
Total.....	2, 324. 22

Forage has been raised as an incident to the main object, the planting of barren tracts with permanent grass pastures. This has been slightly extended to the planting of tracts in alfalfa, so that a permanent hay crop is assured on an otherwise worthless field.

Fort Reno Remount Depot.—Improvements have been made at this depot during the fiscal year, which have largely been in the nature of caring for buildings, roads, and grounds in the vicinity of the post. Other improvements are contemplated and will be effected before winter. Temporary shelter will be constructed in the vicinity of the post where feeding can be readily carried on without the loss of time and expense of labor.

Acreage under cultivation during the fiscal year 1916 was the same as that for fiscal year 1915. The acreage in pasture was also the same as that for fiscal year 1915. Up to June 30, 1916, 316 tons alfalfa hay were baled and stored. Experiments were made with sudan grass, and this crop yields excellent returns. The feeding value of sudan grass has not yet been ascertained, but should it prove to be a good feed crop and relished by the animals, a considerable acreage of it will be sown next year. The feterita forage grown was of excellent quality.

Miscellaneous statements.—The following statements pertaining to transportation are appended:

Statement showing principal movements of troops in the United States for strictly military purposes, marked "Exhibit No. 14."

Statement showing special movements of troops in connection with labor strikes, parades, dedications, celebrations, etc., marked "Exhibit No. 15."

Statement showing number of National Guard and Organized Militia moved to Mexican border from each State prior to August 1, 1916, marked "Exhibit No. 13."

Statement showing operations of the transportation division of the Quartermaster Corps in the Hawaiian Islands, marked "Exhibit No. 16."

Statement showing operations of the transportation division of the Quartermaster Corps in the Philippine Islands, marked "Exhibit 16½."

Statement showing weight of baggage of officers, noncommissioned officers, and civilian employees transported at public expense, with cost of shipment and cost of packing and crating, marked "Exhibit No. 17."

Statement showing cost to the Quartermaster Corps of operation of military telegraph lines in Alaska exclusive of the operation of the cable ship *Burnside*, marked "Exhibit No. 18."

Statement showing motor trucks purchased during the fiscal year, except the Philippine Islands, marked "Exhibit No. 19."

Statement showing automobiles in use June 30, 1916, except Philippine Islands, marked "Exhibit No. 20."

PHILIPPINE ISLANDS.

Fuel.—The cost of coal for domestic purposes at posts in the department was found so high that the use of wood has been substituted at practically all stations in order to keep the cost of fuel down to at least what it has been heretofore. The Army range is adapted to either fuel and no change in fire boxes was required.

Native lumber.—During the year native lumber has been used exclusively for general purposes throughout the department. There seems to be a diversity of opinion as to the suitability of native lumber as compared with Oregon pine. A report on this subject was called for from the different posts, and a statement of the result, marked "Exhibit 23," is inclosed. On the whole, however, the native lumber (Lauan, Tanguili, and Apitong) have proved so satisfactory and much cheaper than Oregon pine that contract has been made for over 4,500,000 feet of rough lumber at \$24 per 1,000 board feet, and 411,000 feet of flooring at \$30 per 1,000 board feet.

Green forage and bedding.—Green forage has been procured under contract to supplement the forage ration for animals in this department at posts of Camp Eldridge, Camp McGrath, Camp John Hay, Camp Stotsenburg, Fort William McKinley, and Manila. The quality of this class of forage has been very satisfactory. The class usually furnished is known as native zacate, barri grass, and green corn. Rice straw and cogon grass, for bedding, have been supplied under annual contract. At Fort William McKinley, in January, 1916, the animals in several organizations were seriously affected and 11 died. The local veterinarians were puzzled as to the cause but finally, by analysis, traced the trouble to musty rice straw used as bedding. With this exception no complaints as to the quality of bedding have reached this office.

Heavy furniture for officers' quarters.—The following heavy furniture was manufactured at the land transport shops during the year, from native woods:

50 chairs, dining, end.....	\$832.94
228 chairs, dining, side.....	323.49
47 drawers, chests of.....	1,210.52
55 sideboards.....	1,156.55
13 tables, dining.....	652.67
74 tables, kitchen.....	269.09

Orders have recently been given for construction at the land transport shops of additional heavy furniture and ice boxes. All quarters occupied by officers with American troops are now fully equipped with these articles, and when the furniture now under construction is completed all officers' quarters at scout posts will also be fully equipped.

Fresh potatoes.—The procurement of fresh potatoes presented some obstacles. Bids were invited and opened on February 1, 1916. There was but one bidder (Pacific Commercial Co.) and their price was 2.99 cents per pound as compared with 1.56 cents per pound, their old price. The bid was considered excessive and a cable was sent to the depot quartermaster, Nagasaki, to ascertain if he could purchase 500,000 pounds of potatoes, and at what price. He replied, quoting 1.16 cents per pound f. o. b. Nagasaki. He was asked to purchase 500,000 pounds. Later the depot quartermaster, Nagasaki, replied: "Government contractor(s) potatoes, fresh, crop cornered by Pacific Commercial. Will send particulars by mail. Was unable to secure bond." Here we were confronted with a serious proposition. The following letter was sent to all posts, and in the meantime this office began to look about for substitutes:

Report is desired from commanding officers as to the possibility of procuring locally potatoes or substitutes therefor during the months named (March, April, May, and

June), and accounts settled with issuing quartermasters at the end of the month, or whenever necessary, on the basis of the price of the last lot purchased, at \$0.02199 per pound, instead of depending upon the quartermaster for supply as usual.

First. We bought 70,000 pounds of sweet potatoes at 1.25 cents per pound from the Momungan Colony near Camp Overton. These were issued and sold. We cabled the depot quartermaster, San Francisco, and bought 63,000 pounds potatoes at 2.05 cents; they arrived on *Sherman*.

Second. We ascertained that there was an excellent white potato in the local market, and upon investigation found it was shipped from Hongkong. Arrangements were at once made for an open-market purchase of 150,000 pounds of these potatoes at 2.15 cents per pound. This stock, together with the sweet potatoes and the San Francisco shipment, broke the "corner" on white potatoes required for month of April. The low and only bidder (Pacific Commercial Co.) protested any intention of a "corner," but at the same time desired to offer a lower quotation after this office had arranged for March deliveries. For May and June deliveries this same firm offered potatoes at 2.4 cents per pound, ascribing the difference to easier freight conditions. This price was considered excessive, and the depot quartermaster at Nagasaki was requested by cable to quote on 500,000 pounds in that market, shipment to be made on the U. S. Army transport *Merritt* on return trip from China. He quoted 1.65 cents per pound, and purchase was made accordingly for the month of May. For the month of June potatoes were procured from China at 2.05 cents per pound. It was impossible to procure potatoes from Japan for June consumption on account of lack of transportation facilities.

Fresh fruit.—Fresh fruit received from San Francisco has been very good quality and is much appreciated by the personnel of this command. Considering quantities handled and conditions of shipment, losses have been comparatively small. The monthly shipment has been increased as follows: Apples, 200 cases; oranges, 150 cases; lemons, 70 cases; grapefruit, 100 cases. This will give ample fruit to all.

United States Morgue and Burial Corps.—There has been no change in the civilian personnel during the year and the work has been carried on successfully and satisfactorily. Eighty-four bodies were embalmed and prepared for burial, 41 disinterred, 44 shipped to the United States, 31 transferred to other cemeteries, 3 awaiting shipment. The cemetery at Camp Gregg was abandoned and bodies removed to the cemetery at Fort William McKinley.

Quartermaster steam laundry.—To accommodate the needs of the troops the capacity of the laundry in buildings, machinery, and employees, has practically been doubled during the year. This plant is a great convenience and in fact has become a necessity to the troops in Manila and to a large number of organizations other than those stationed in the city. The average number of pieces laundered for the past 11 months was 301,507 per month, at a total cost of \$1.456 per 100 pieces. The number of employees has been increased from 187 to 225, but the full number authorized is not employed except in cases of necessity. In the past collections and delivery of laundry in the city of Manila has been made by two wagons, which has proved unsatisfactory, being both slow and unnecessarily expensive. A Ford chassis has been purchased, for which a body is now

being constructed at land transport shops. This light delivery car, which will run at very moderate expense, will greatly facilitate the collection and delivery of laundry. The cost of operation of this car will of course be borne entirely from the revenues of the laundry and will therefore be without cost to the Government. Due to increased cost of supplies and replacement of machinery, the rate for enlisted men was increased in January, 1916, from \$1.25 to \$1.50 per month, and flat-rate work for the Quartermaster Corps and Medical Department from \$1.25 to \$1.30 per month.

Reservations.—There has been very little change in the reservations during the year. Camps Gregg and Treadwell were both abandoned and all buildings and other structures at those stations, in so far as it was practicable to do so, were demolished and the material salvaged.

A small addition to the Camp Eldridge Reservation was purchased for the purpose of making a necessary extension to the target range.

Agreement has been made with the owners for the purchase of two parcels of land lying within the limits of the Camp Gregg Reservation, but as yet the required papers in the case have not been completed.

At Augur Barracks, Jolo, an old blockhouse and the grounds surrounding it, not needed by the military authorities, were turned over to the constabulary for its use until further orders. The civil government was given a license to construct a roadway through the Augur Barracks Reservation.

BARRACKS AND QUARTERS.

All buildings at Manila depot have been repaired and repainted, but the floors in some of the buildings will require additional work in the near future, which will be taken up as soon as funds become available. Twenty-eight iron-pipe posts have been installed in the laundry grounds at the Manila depot and equipped with galvanized-iron wire for the air drying of heavy articles, such as canvas bunk bottoms, blue denim, and cotton O. D. cloth. The grounds have been improved in appearance by the setting out of hedges bordering roads and walks and the use of flowering shrubs.

The condition of barracks and quarters at the different posts in this department is as good as could be expected under the circumstances. The majority of them are old and badly in need of extensive repairs. Although for several years the appropriation has been insufficient to keep the barracks and quarters in repair, this year it has been particularly insufficient on account of extra repairs made necessary by the succession of storms, one or more of which has reached and damaged nearly every post in the department. In order to repair the damages caused by these storms it was necessary to use funds which had been allotted for annual repairs; consequently, repairs much needed at the present time will have to be delayed until funds for the next fiscal year become available. The following construction of barracks and quarters is now under way or has been completed:

Fort Mills.—Two Infantry barracks, permanent construction; five scout barracks, temporary construction, to replace five barracks demolished during typhoons; a hangar, complete with plumbing and electric wiring.

Fort William McKinley.—This post was provided during the last fiscal year with a bakers' school barrack by enlarging and remodeling a building formerly used for civilian employees. Also, a kitchen was built in connection with the present post bakery building, for baking pastry in conjunction with the bakers' and cooks' school. The two double sets of company officers' quarters, semipermanent, are now under construction at this post.

Camp Stotsenburg.—Twelve old field officers' quarters, nipa construction, are being replaced by new wooden construction, and in addition, six new sets of quarters are being built at this post.

Camp Overton.—Two new sets of company officers' quarters were constructed at this post during the past fiscal year.

Camp Keithley.—Four cottages built as rest houses were, during the year, remodeled into satisfactory officers' quarters.

Camp Nichols.—Two double sets of officers' quarters, semipermanent construction, have been completed during the year.

Camp John Hay.—Two frame barracks were constructed at the scout garrison at this post from the same plans as the present barracks. The scout barracks now have sufficient accommodations for one battalion.

Bakeries, storehouses, stables, etc.—These buildings are in the same condition as the barracks and quarters, being in need of extensive repairs during the coming fiscal year.

A large modern and well-equipped bakery, permanent construction, has been completed at Fort Mills during the year.

The baking facilities at Camp John Hay have been increased during the year by the installation of an additional oven.

Storage facilities at Fort Mills, Fort William McKinley, and Camp John Hay have been increased to some extent during the present year.

No new stables have been constructed during the present fiscal year, and very little change has been made in the old ones.

A small addition was made to the Signal Corps stables at Fort William McKinley. The blacksmith shops and guard house in connection with the Cavalry stables at Camp Stotsenburg were rebuilt by the use of material salvaged from Camp Gregg.

The following bake ovens are now installed and in operation at the different posts in this department: Marshall, No. 30, 8; No. 40, 20. Middelby, No. 3, 2; No. 1, 1. Blodgett Stanard, 3; No. 19, 2. Knocked-down type, 1. Concrete, 1.

A number of ovens have been repaired and some have been replaced during the year. All of them are now in good working condition.

Hospitals.—New hospitals under construction at Camp John Hay and Camp Nichols have been practically completed. Sufficient screening has also been furnished Camp Nichols to completely screen the hospital at that post. The hospitals at the other posts in the department are in good condition and sufficient funds were available during the year to keep them in repair.

A temporary smallpox hospital has been constructed at Augur Barracks.

The hospital at Fort San Pedro, Iloilo, has been remodeled to provide a dressing room.

Electric passenger elevators have been installed in the hospital at Fort William McKinley, and at the department hospital, Manila.

Water supply.—In general, the water supply at the different posts is ample and water is of good quality, although in most places it is not potable.

The water supply at Camp John Hay has been improved by the installation of electrically driven pumps and an increase in the reservoir capacity. Arrangements have been made for procuring a hypochloride dosing apparatus for the water system at Camp John Hay, which, when installed, will render the water potable and will allow the distilling plant to be discontinued.

The water supply at Fort William McKinley is derived from two sources—wells and seepage water along the Pasig River. The well system is satisfactory and is sufficient to supply potable water for all purposes excepting fire and sprinkling. The seepage water system has been remodeled and increased during the year, in so far as funds would permit. It is the intention to carry on the work during the next fiscal year. When completed, Fort William McKinley will have a water supply sufficient for all needs.

The water system at Camp Eldridge has been improved during the year by the installation of a larger sized main to the reservoir, and now it has a water supply sufficient for all purposes.

The water system at Camp Overton was improved during the year by raising the elevation of the intake and straightening the pipe. Shortly after this work was completed a flood carried away a portion of the pipe line, but this has been replaced and the water system is in good condition at present.

The water system at Pettit Barracks is not satisfactory at present, but as the city of Zamboanga is installing a water system which when completed will be sufficient to supply both the city and the post, nothing is being done at present except to keep the system in operation. When the city water system is completed arrangements will be made to procure water from this system.

An attempt was made to drive an artesian well at Ludlow barracks for the purpose of obtaining a satisfactory and potable water supply. This attempt was not a success. It is believed that one of the reasons why a successful well was not obtained is that it was not properly located. Further investigation will be made, after which it will be determined whether or not the probabilities of obtaining a potable water supply are sufficient to justify another attempt.

Camp Stotsenburg has two sources of water supply, one from the river and the other from artesian wells. Owing to the condition of the pipe line and the failure of the wells, the water supply was reduced below the needs of the post. The pipe line for the river water supply has been placed in good condition and a reservoir in connection therewith is being constructed. Two new successful artesian wells have been driven. When the reservoir is completed and the machinery installed for pumping the new wells, Camp Stotsenburg will have a water supply sufficient for all necessary purposes.

Camp Nichols obtains its water from an artesian well. This has been improved during the year by the erection of a new tank, and by the installation of an auxiliary engine for use in case of emergency. The water supply is now satisfactory and ample for all necessary purposes.

The large project of water conservation at Fort Mills is well under way. Downspouts have been placed on a number of the buildings, a number of successful wells have been driven, and a number of springs

have been opened up and arrangements made for conserving the water therefrom, and the excavations for two of the reservoirs are made. Work on the reservoirs is delayed on account of lack of material, which has been ordered from the States.

A new high-power electrically driven triplex pump and other equipment, including condenser, etc., for the more economical operation of the pumping plant and to increase its capacity, is being purchased under contract. A new boiler to be installed in conjunction with the present boilers, to increase the capacity of the boiler plant, is also being purchased.

The Sisiman water supply has been placed in good condition, and as soon as the new water barge is completed it will materially assist in supplying water for Fort Mills and the other Coast Artillery posts in Manila Bay.

The project of increasing the water supply at Fort Frank by raising the intake and installing a new pipe line from the mainland to Carabao Island is now under way. After this project has been completed Fort Frank will have a supply of water sufficient for all purposes.

Water for the use of the military stations in Manila, excepting for drinking purposes, is secured from the city water supply. This is of course paid for on meter readings. In the past it was customary to have but one meter at each station, in consequence of which sewerage charges were paid on all water consumed. During the past year this has all been changed, so that water for sprinkling purposes, watering stock, etc., is paid for on a different meter and no sewerage charges paid thereon. This has resulted in a considerable saving in the expenditures for water for stations in Manila.

The water used for drinking purposes was formerly obtained from the distilling plant located at the land transport corral. As the operating expenses of this plant were very large, it was decided to make an attempt to obtain a successful artesian well for the purpose of supplying drinking water to the different stations in Manila. A well was driven at the Cuartel de Espana. Although the well was successful, unfortunately, on account of the failure of the distilling plant, the water from this well had to be used before it had been pumped sufficient to clear it. Like all other artesian wells in this vicinity, the water at first is very unpalatable, but after having been used for some time it finally clears up and becomes palatable. It is believed that the result in this case will be the same as in others.

The distilling plant at the land transport corral having been unserviceable, it was dismantled and installed in connection with the fire system at the Manila depot for use in case of emergency.

A successful artesian well has been drilled at the department hospital and the installation of machinery completed. It will deliver sufficient water to supply this station.

Sewer systems.—At such posts that have sewer systems the same have been satisfactory during the year. Sufficient funds have been available to keep these systems in proper condition. However, at a number of posts dry-earth closets are still in use. These are being replaced by sewer systems as rapidly as funds will permit.

A sewer system has been installed at Camp Nichols during the present year, and funds to start sewer systems at Camp Keithley and Regan Barracks have been allotted. Work on these systems is now under way.

As soon as the post of Pettit Barracks is connected with the water system of the city of Zamboanga, it is proposed to install a sewer system at that place should the necessary funds be available.

The sewer system at Fort William McKinley is being improved by the installation of a new bacteriological tank. When this tank has been completed the sewer system at Fort William McKinley will be satisfactory and in good condition.

New incinerators have been constructed during the year at Fort Mills, Camp John Hay, and Regan Barracks.

Lighting systems.—The only stations in this department lighted by electricity are Camp John Hay, Fort William McKinley, Fort Mills, and the posts in Manila. Fort Mills and Camp John Hay have their own lighting systems. At the other posts mentioned electric current is purchased from the Manila Electric Railroad & Light Co.

It is the intention to install a generating plant at Fort William McKinley, and one generator, two exciters, one switchboard, complete, and one condenser, to be used in conjunction with street and service lighting, for installation in the new power plant in connection with the steam engine and generator now on hand, are being purchased under contract. Electric house meters to replace those now owned by private parties, as well as constant-current transformers with street-lighting brackets and lamps to replace the present arc lamps, are also under contract.

It is the intention during the fiscal year 1917 to pay on one meter reading for all current consumed at the different stations in Manila, and to this end meters are being purchased under contract for use where it is necessary to measure current to comply with existing regulations to replace those now owned by the lighting company.

Sufficient funds have been available during the year to keep the system at Fort Mills in repair, and the same has been satisfactory. The only additions made thereto have been the necessary extensions to furnish light to buildings completed.

Camp Stotsenburg was provided with a switchboard to be used in conjunction with a small generator.

At Camp John Hay a concrete shed was erected for the protection of certain electrical equipment and main valves for the hydroelectric plant; also the electric substation at this post was provided with additional equipment, and a machine shop was installed in conjunction with the ice plant.

Complete apparatus has been purchased for the installation of series street lighting at Camp John Hay, as well as cooking ranges, hot-water heaters, and air heaters for the entire post, so as to utilize power now generated by the hydroelectric plant.

Ice, distilling, cold-storage, and pumping plants.—These, in the main, have been satisfactory throughout the department and sufficient funds have been available to keep them in proper condition.

During the year an inspection of every plant has been made by an engineer from this office, the result of which has been an improvement in the condition of all these plants and a saving in the amount of coal consumed.

During the year a new compressor was installed at Camp Eldridge. New compressors have been purchased for Fort Mills, but as yet have not been installed. Material and apparatus have also been purchased for insulating one of the rooms in the present bombproof plant at this

post, as well as a new ammonia condenser, piping, etc., so as to increase the cold-storage facilities, and to be used in conjunction with the two 65-ton ammonia condensers already purchased.

The ice and cold-storage plant at Camp John Hay is being enlarged and remodeled. When completed this post will have a plant sufficient for all needs and should be a very economical one, as it will be operated by electricity. A machine shop was installed in conjunction with the ice plant at this post, as stated in paragraph 48.

As stated before, the distilling plant at the land transport was moved to the depot. When the new well at the department hospital is in operation, the distilling plant at that place can be discontinued.

Roads and walks.—The roads at the different posts in the department are in good condition, and sufficient funds have been available to keep them in proper repair.

Road extensions have been made at Camp Eldridge, Camp John Hay, Camp Stotsenburg, and Fort Mills.

A cableway is being erected at the hydroelectric plant at Camp John Hay, so as to provide a better means of reaching the plant and a safe exit for the employees in case of danger.

Considerable grading in connection with the scout post at Camp John Hay was done during the year.

At Camp Stotsenburg funds have been allotted for the purpose of building a road to connect the post system with the insular public-road system. After this road has been completed there will be a first-class road from Camp Stotsenburg to Manila.

During the year funds were allotted for resurfacing the Overton-Keithley road. While this work was being carried on the road was severely damaged by flood, which carried out some of the bridges, washed out portions of the roadbed, and caused slides which covered other portions. All steps possible were immediately taken to clear this road and it is now passable for automobiles. Work is being carried on in repairing the road and resurfacing it, and such funds as could be used during the year were allotted. It is the intention to carry this work on until completed, such funds as are necessary to be provided from the fiscal year 1917 appropriation.

Considerable grading has been done at Fort Mills in connection with new construction at that post.

The old bridge across the moat at Fort Santiago has been replaced by a fill and a macadam roadway, which has very much improved the appearance of the entrance to Fort Santiago.

Wharves.—Pier No. 1, Manila, has been completed and surfaced with block pavement during the year and is now in splendid condition.

Contract has been let for the construction of Pier B on the Port Reservation, Manila. This pier will be constructed on the bay side of the strip of land known as Lot No. 2, Port Reservation, Manila, and will be directly opposite the present Pier A. The construction consists of concrete piles of sufficient size and driven to sufficient depth to provide for a future concrete docking. The present plan is to install a wooden deck, with the necessary wooden beams, etc., protecting same with an asphaltum coating.

Extensive repairs have been made to the wharf at Camp Eldredge.

A new wharf has been built at Camp Keithley.

Two new wharves, in connection with water supply at Sisiman, are being constructed.

A contract was made with the civil government for the dredging of the approaches to the wharves at Fort Mills. Anchors and buoys were also furnished Fort Mills.

The wharf at Iloilo has been improved by the installation of fender piles, so that interisland transports can go alongside and unload at this wharf at any stage of the tide.

The old wooden wharf at Fort William McKinley was replaced by a concrete wharf during the year.

The wharves at Ludlow Barracks, Augur Barracks, and Camp Overton have been kept in serviceable condition, and while the wharf at the latter post is not in perfect condition, sufficient funds were allotted to keep it in repair during the year.

Screening.—Such funds as were available were allotted the different posts in the department during the year for screening, and a statement showing the condition of the different posts in regard to screening is inclosed.

Typhoons.—This department was visited during the year by four destructive typhoons and a disastrous flood at Camp Overton, which occurred on the following dates: October 23, November 3, December 7, 1915, January 14 to 27 and May 6, 1916, resulting in damage to the different posts as follows:

Camp Eldredge.....	\$73. 40
Camp John Hay.....	8, 713. 92
Camp Overton (O.-K. Road).....	32, 000. 00
Camp Overton.....	6, 000. 00
Camp McGrath.....	3, 288. 00
Camp Stotsenburg.....	4, 737. 00
Fort Mills.....	78, 341. 50
Regan Barracks.....	970. 00
Augur Barracks.....	4, 000. 00

Fire apparatus.—The fire apparatus at the different posts has been kept in good condition. On investigation it was found that no standard had been adopted for the size of hose and hydrants at the different stations. A standard has been adopted which conforms to that in general use and the project is under way to standardize all of this apparatus at the different posts in the department.

Post exchanges.—The post exchange handball court has been constructed at Fort William McKinley, and jumping standards have been furnished all posts in the department.

Motor.—The economy of motor transportation over animal-drawn is no longer debatable, but so far as this department is concerned, the initial cost of motor trucks and the limited appropriation available prohibits consideration of any very considerable increase in trucks. A recent board of officers on Corregidor Reserve recommended exclusive use of motor transportation for Corregidor Island. Owing to the distance from the factory, the cost of upkeep of motor transportation in these islands is very great for two cogent reasons, viz:

First. In order to avoid delays in making repairs the department is called upon to invest large sums of money in spare parts sent out from the States, or,

Second. These spare parts are bought locally, as needed, at an exorbitant price, because the local dealer must bear the outlay mentioned in first paragraph above, and he makes his retail price to cover interest on investment.

These conditions should not be overlooked in considering motor transportation for this department.

One auto truck of 1½-ton capacity was purchased and placed in service on the Overton-Keithley Road, which, together with the supply of two trailers, which were manufactured at the land-transport shops at a cost of \$714 each, released for assignment elsewhere 22 draft animals.

Twelve 2-ton, one three-fourths ton, and four Ford truck chassis, three Ford runabouts, and one 7-passenger touring car have recently been ordered.

Three of the 2-ton trucks arrived here from San Francisco on July 3, 1916, and will be sent to Camp John Hay for use in hauling fuel for the post. Contract was made for 3,243 cords of wood, delivery to be taken at a point 7 miles from the post, at a price \$14,593.50 less than the lowest bid for delivery at post, and these three truck chassis will be equipped with bodies constructed at Manila Depot suitable for transporting this wood to post.

Three of the 2-ton trucks will be used on the Overton-Keithley Road and the post authorities at Camp Overton have been instructed to submit plans for suitable bodies, and trailers, if desired, to be constructed at Manila Depot.

It is estimated that each of the 2-ton trucks to be used on the O.-K. Road and in Manila will take the place of two 4-mule teams at present in service, and the light trucks each take the place of two light delivery teams. Requisitions for animals for fiscal year 1917 will be reduced accordingly.

Railroads.—Regan Barracks has been connected by a spur track to the Manila Railroad during the year. This utility is now in operation and has resulted in a great saving in wagon transportation.

The electric railroad at Fort Mills has been kept in good condition and funds have been allotted for double-tracking it. This project is well under way and it will be nearly, if not entirely, completed by the end of the present calendar year.

Transportation, water.—The equipment of inter-island transports, harbor boats, mine planters, distribution box boats, launches, lighter-ages, and rowboats has been maintained in a satisfactory state during the year. The following additions have been made to this equipment at cost indicated: Scow No. 143, \$6,795; scow No. 144, \$6,795.

Due to lack of water transportation and funds pertaining to fiscal year 1916 being available, contracts have been made for the construction of five additional scows, viz: Two 110 feet long at an estimated cost of \$18,100; work was begun June 12, 1916, and calls for completion in 76 working days. One 110 feet long; contract price, \$10,515.60; work was begun June 28, 1916, and is to be completed in 68 working days. Two 80 feet long; contract price, \$10,750; work was begun June 28, 1916, and is to be completed in 90 working days.

The following equipment was lost during typhoons in October and December, 1915:

	Value.
Scow No. 39.....	\$1,700
Scow No. 45.....	2,000
Lorcha No. 106.....	3,800
Scow No. 121.....	1,750
Scow No. 124.....	3,650
Total.....	12,900

Total, 1 lorcha and 4 scows.

Lorcha No. 90, value \$13,814.37, was sunk at sea en route to Aparri. Repairs to equipment, made necessary incident to typhoons, amounting to \$40,000, were made from apportionment made to this department for fiscal year 1916.

Manual for the Quartermaster Corps.—The compilation of a manual for the Quartermaster Corps has been in progress for several months. When completed it will cover the consolidated corps and will embrace all subjects contained in the manuals for the former Quartermaster, Pay, and Subsistence Departments.

It is estimated that the manual will be ready for distribution to the service by January 1, 1917.

Civilian employees, Office of the Quartermaster General.—The legislative, executive, and judicial appropriation bill, fiscal year 1916, provides for 295 employees of this office, 235 of the number being clerks. The organization of the office is that approved by the Secretary of War September 10, 1912, and with this organization great economies in the administration of the business of the office and Quartermaster Corps have been accomplished. The clerks have attained a high state of efficiency and are entitled to great credit for the splendid work performed during the year. Delinquencies have been remarkably few. The office has kept step with modern commercial developments in its business methods, and the work has been simplified and so systematized as to require the fewest clerks possible.

The national defense act, approved June 3, 1916, will, it is believed, after a careful analysis of its provisions, increase the work of this office 40 per cent, and the clerical force must necessarily be increased. With a view to obtaining additional clerical assistance this office, on May 20, 1916, the date the national defense act passed the House of Representatives, submitted a supplemental estimate for 30 clerks (3 principal clerks at \$2,000; 4 clerks at \$1,600, 6 at \$1,400, 8 at \$1,200, and 9 at \$1,000 per annum), an increase of approximately 10 per cent. These clerks are urgently required in the grades indicated to assist in handling the large amount of additional work imposed upon the office by the national defense act.

The need for the grade of principal clerk of branch at \$2,000 per annum has been much felt since the consolidation of the Pay, Subsistence, and Quartermaster's Departments on November 1, 1912 (fiscal year 1913), at which time the Quartermaster General in his scheme for an office force for a consolidated bureau, recommended six such positions. This grade was again asked for for the fiscal years 1915 and 1917. This latter year Congress authorized three of the positions, and it is hoped that it will authorize the remaining three which have been estimated for, thus completing the organization originally proposed.

In a number of previous annual reports this office called attention to the need for some equitable system of retirement for superannuated clerks. Because of the consideration that has been given this subject both in and out of Congress, I do not deem it necessary to say more in this report than that as each year passes the need for some such provision becomes more pressing.

Very respectfully,

HENRY G. SHARPE,
Brigadier General, Quartermaster Corps,
Acting Quartermaster General.

Organized Militia.....	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200
With Governor, Panama Canal Zone.....	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200
Military attaché, Buenos Aires, Argentina.....	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200
In hospital.....	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200

EXHIBIT 2.

Grade and examination.	Number ex- amined.	Number ap- pointed.
Educational:		
Master electrician.....	17	1
Sergeant, first class—		
Baker.....	17	2
Blacksmith and horseshoer, foreman.....	15	.....
Carpenter, foreman.....	27	1
Clerk.....	122	16
Electrician.....	18	2
Engineer, foreman.....	29	2
Mechanic, foreman.....	5	.....
Packmaster.....	6	.....
Painter, foreman.....	11	.....
Plumber, foreman.....	16	.....
Superintendent of transportation.....	12	.....
Trainmaster.....	18	3
Truckmaster.....	.....	17
Total.....	296	33
Sergeant—		
Chauffeur.....	134	143
Clerk.....	143	75
Electrician.....	24	8
Engineer.....	57	11
Foragemaster.....	5	1
Storekeeper.....	15	.....
Total.....	378	239
Total educational.....	691	272
Noneducational:		
Sergeant—		
Baker.....	34	15
Blacksmith and horseshoer.....	64	47
Carpenter.....	50	16
Farrier.....	12	2
Fuel overseer.....	18	17
Mason.....	6	1
Overseer.....	83	31
Packmaster.....	11	8
Painter.....	34	5
Plumber.....	23	10
Saddler.....	41	18
Tinner.....	5	2
Trainer.....	1	1
Wagonmaster.....	40	10
Wheelwright.....	5	.....
Total noneducational.....	427	183
Grand total.....	1,118	455

¹ Appointed after practical test.

EXHIBIT 3.

Statement showing number of enlisted men, Quartermaster Corps, by grades, apportioned for the performance of the various duties of the Quartermaster Corps in the United States, Hawaii, and the Philippines, the number of such men actually in the service, and the number of vacancies as of June 30, 1916.

	Master elec- tricians,	Ser- geants, first class.	Ser- geants.	Cor- porals.	Cooks.	Pri- vates, first class.	Pri- vates.	Total.	Va- cancies.
United States (including Alaska, Porto Rico, and Canal Zone):									
Apportioned.....	4	94	1,028	515	75	2,291	543	4,540	.....
In the service.....	4	86	954	404	75	2,103	621	4,307	.....
Vacancies.....	.....	8	74	51	.....	178	.....	.....	311
Hawaii:									
Apportioned.....	.....	5	66	26	6	157	27	287	.....
In the service.....	.....	5	63	25	6	153	25	277	.....
Vacancies.....	.....	.....	3	1	.....	4	2	.....	10
Philippines:									
Apportioned.....	3	18	143	46	11	299	32	552	.....
In the service.....	3	14	132	43	8	261	14	475	.....
Vacancies.....	.....	4	11	3	3	38	18	.....	77
Totals:									
Apportioned.....	7	117	1,237	587	92	2,737	602	5,379
In the service.....	7	105	1,149	532	89	2,517	660	5,059
Vacancies.....	12	88	55	3	220	378

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EXHIBIT 4.

Treasury balance books, financial statement, Quartermaster Corps, fiscal year ending June 30, 1916.

For appropriations designated as annual there was provided for the service of the Quartermaster Corps for the fiscal year ending June 30, 1916, and by allotments, the sum of.....	\$106,321,893.60	
During the said fiscal year 1916 there was deposited to the credit of said appropriations by Treasury settlements, sales, collections, balances, etc., the sum of.....	9,062,308.26	
And by department and Treasury transfers and miscellaneous items the sum of.....	92,912.49	
Total.....		\$115,477,114.35
Of this there was remitted to disbursing officers upon requisitions, the sum of.....	109,981,829.10	
There was expended on account of settlements made at the Treasury, the sum of.....	889,170.99	
And by department and Treasury transfers and miscellaneous items....	2,630.01	
Total.....		110,873,630.10
Leaving a balance on hand July 1, 1916, available for payment of outstanding obligations, the sum of.....		4,603,484.25
On July 1, 1915, there was on hand from annual appropriations for the service of the Quartermaster Corps, pertaining to said fiscal year, the sum of.....	4,656,735.74	
Also on hand from appropriations of other fiscal years, including all special and indefinite appropriations, the sum of.....	2,714,693.39	
There was added during the fiscal year ending June 30, 1916, by appropriations and allotments, the sum of.....	2,467,793.03	
During said fiscal year there was deposited to the credit of these appropriations by balances, sales, collections, etc., and settlements made at the Treasury, the sum of.....	3,548,588.09	
And by department and Treasury transfers and miscellaneous items.....	34,184.23	
Total.....		13,421,994.48
Of this there was remitted to disbursing officers on requisition the sum of..	6,233,901.75	
There was paid out on account of settlements made at the Treasury the sum of.....	1,023,098.21	
And on account of department and Treasury transfers and miscellaneous items.....	2,321,278.59	
Carried to surplus fund, the sum of.....	2,002,226.91	
Total.....		11,580,505.46
Leaving a balance on hand July 1, 1916, available for payment of outstanding obligations pertaining to fiscal years 1915, 1914, etc., and special or indefinite appropriations, the sum of.....		1,841,489.02

RECAPITULATION.

Balance on hand, all appropriations, July 1, 1915, fiscal year 1915.....	7,371,429.13	
Appropriated by Congress for fiscal year ending June 30, 1916.....	106,321,893.60	
Credited to all appropriations by deposits, transfers, Treasury settlements, allotments, etc.....	15,205,786.10	
Total.....		128,899,108.83
Remitted to disbursing officers, all appropriations.....	116,215,730.85	
Charged on account of transfers and Treasury settlements, etc.....	4,236,177.80	
Carried to surplus fund.....	2,002,226.91	
Total.....		122,454,135.56
Balance on hand July 1, 1916, for all appropriations of the Quartermaster Corps.....		6,444,973.27
Grand total for fiscal year ending June 30, 1916, of all appropriations of the Quartermaster Corps, the sum of.....		128,899,108.83

EXHIBIT 5.

Detailed expenditures of the Quartermaster Corps for the fiscal year ended June 30, 1916, itemized under different appropriations, as compared with cost for similar purposes, fiscal year 1915.

APPROPRIATION: "SUPPLIES, SERVICES, AND TRANSPORTATION, QUARTERMASTER CORPS."

Class and purpose.	Fiscal year 1916.	Fiscal year 1915.	1916 less than 1915.	1916 greater than 1915.	Net reduction.
Class A, supplies:					
Quartermaster depots, independent stations, and constructing quartermasters.....	\$358,329.11	\$1,271,795.35			
Central Department.....	85,974.05				
Eastern Department.....	332,069.27				
Hawaiian Department.....	118,734.75				
Southern Department.....	386,505.58				
Western Department.....	173,858.33				
Civilian outer clothing.....	28,805.17	29,129.01			
Packing materials.....	92,366.06	94,463.81			
Barbers' materials.....		2,583.81			
Housewives.....		1,971.76			
Tailors' materials.....		890.15			
Toilet articles.....	107,183.48	41,943.29			
Toilet kits.....		58,782.60			
Total Class A.....	1,683,825.80	1,501,559.78		\$182,266.02	
Class A-1, supplies:					
Subsistence stores (formerly subsistence of the Army).....	12,947,771.24	11,414,673.30			
Prizes for enlisted men who graduate from cooks' and bakers' schools.....	642.50				
Total Class A-1.....	12,948,413.74	11,414,673.30		1,533,740.44	
Class II, services:					
Quartermaster depots, independent stations and constructing quartermasters.....	27,174.99	120,878.96			
Central Department.....	12,527.97				
Eastern Department.....	28,307.94				
Hawaiian Department.....	12,374.52				
Southern Department.....	13,550.52				
Western Department.....	15,459.05				
Altering, fitting, washing, etc....	12,073.03	14,125.92			
Total Class II.....	121,468.02	135,004.88	\$13,536.86		
Class I, personal:					
Civilian employees.....	4,040,147.61	3,858,863.92			
Extra duty.....	55,069.93	29,356.50			
Deserters, apprehension of.....	83,287.97	91,710.61			
Donations to dishonorably discharged prisoners.....	15,480.00	16,285.00			
Reimbursement of travel expenses.....	55,351.76	46,733.42			
Travel allowances to discharged enlisted men.....	435,664.86	596,469.72			
Pay for clothing not drawn due enlisted men on discharge.....	619,366.06				
Total Class I, personal.....	5,304,388.19	4,639,419.17	664,969.02		
Class I, nonpersonal:					
Heat, purchase of, account rentals, including recruiting stations.....	37,396.38	118,704.24			
Light, purchase of, electric current and gas, including light as part of rentals of quarters, etc..	856,331.75	874,241.35			
Subscriptions, newspapers and periodicals.....	7,112.12	5,179.25			
Printing blank forms, Quartermaster Corps, and orders, etc., at headquarters of divisions and departments.....	96,359.36	94,097.69			
Shoeing animals.....	13,146.33	14,991.92			
Telegrams, payment of.....	50,433.78	38,290.90			
Telephones, rental of.....	29,956.85	26,603.06			
Drayage at depots.....	20,955.48	30,619.27			

Detailed expenditures of the Quartermaster Corps for the fiscal year ended June 30, 1916, itemized under different appropriations, as compared with cost for similar purposes, fiscal year 1915—Continued.

APPROPRIATION: "SUPPLIES, SERVICES, AND TRANSPORTATION, QUARTERMASTER CORPS"—Continued.

Class and purpose.	Fiscal year 1916.	Fiscal year 1915.	1916 less than 1915.	1916 greater than 1915.	Net re- duction.
Class I, nonpersonal—Continued.					
Hauling at posts.....	\$39,633.19	\$46,837.50	.....	.....	.....
Tolls and ferriages.....	.....	25.00	.....	.....	.....
Wharfage.....	53,983.44	53,504.00	.....	.....	.....
Transportation accounts.....	3,608,462.36	4,318,951.26	.....	.....	.....
Purchase of water.....	275,212.03	217,337.46	.....	.....	.....
Garbage, disposal of.....	9,957.47	9,884.00	.....	.....	.....
Total Class I, nonpersonal.....	4,598,970.54	5,349,272.90	\$750,302.36	.....	.....
Recruiting: Incidental expenses of recruiting.....	121,570.45	109,692.79	.....	\$11,877.66	.....
Class B, supplies, and Class III, services:					
Annual repairs and maintenance, heating apparatus.....	53,425.54	56,506.57	.....	.....	.....
Annual repairs, lighting plants..	49,602.20	49,110.43	.....	.....	.....
Annual repairs to bakeries.....	5,133.01	6,136.66	.....	.....	.....
Annual repairs to bake ovens and equipment.....	3,916.78	3,367.21	.....	.....	.....
Annual repairs (water and sewers).....	62,509.91	53,402.26	.....	.....	.....
Total Classes B and III.....	174,587.44	168,423.13	.....	6,164.31	.....
New construction, installations, and betterments:					
Appliances for cooking and serving food at posts.....	21,704.90	.....	.....	.....	.....
Bake ovens and apparatus.....	21,478.16	63,325.54	.....	.....	.....
Cold storage, rental of.....	2,849.25	5,440.00	.....	.....	.....
Field ranges.....	10,858.09	20,000.00	.....	.....	.....
Fences, construction.....	8,722.04	13,647.61	.....	.....	.....
Heating apparatus, installations in connection with new construction.....	36,803.65	28,853.42	.....	.....	.....
Heating apparatus, renewals and installations other than in connection with new construction.....	42,704.17	15,236.02	.....	.....	.....
Ice machines, installations.....	1,328.35	.....	.....	.....	.....
Ice machines, maintenance of....	2,931.35	2,177.75	.....	.....	.....
Lighting fixtures in connection with new buildings.....	12,213.68	13,685.35	.....	.....	.....
Lighting plants, renewals and installations.....	77,407.29	7,506.36	.....	.....	.....
Post bakeries, construction.....	3,270.00	7,758.90	.....	.....	.....
Laundries, construction and repair of.....	35,577.40	1,121.00	.....	.....	.....
Kitchen wagons.....	.....	300.00	.....	.....	.....
Laundries, maintenance.....	510.60	164.85	.....	.....	.....
Fire apparatus, purchase and repair of.....	32,192.65	17,387.95	.....	.....	.....
Time, fire-alarm service, etc.....	621.50	799.00	.....	.....	.....
Garbage crematories.....	.....	.....	.....	.....	.....
Plumbing in new buildings.....	55,020.60	46,972.49	.....	.....	.....
Repairs to plumbing in buildings.....	80,140.20	61,793.37	.....	.....	.....
Construction of water and sewer systems.....	131,888.22	35,703.28	.....	.....	.....
Sterilizers, incinerators, etc.....	228.03	61.25	.....	.....	.....
Incandescent lamps.....	20,868.01	.....	.....	.....	.....
Total.....	599,318.74	284,941.15	.....	314,377.59	.....
Contracts: Procurement of materials for manufacture of clothing; purchase of clothing; manufacture of clothing; purchase of equipage.....	9,942,009.23	6,673,805.24	.....	3,268,203.99	.....
Class D, supplies:					
Miscellaneous.....	114,835.24	86,736.25	.....	.....	.....
Typewriters, purchase and repair	36,179.35	16,474.91	.....	.....	.....
Adding machines.....	4,562.25	.....	.....	.....	.....
Technical books.....	173.45	344.00	.....	.....	.....
Band instruments.....	24,476.57	40,811.09	.....	.....	.....
Total Class D.....	180,226.86	144,366.25	.....	35,860.61	.....

Detailed expenditures of the Quartermaster Corps for the fiscal year ended June 30, 1916, itemized under different appropriations, as compared with cost for similar purposes, fiscal year 1915—Continued.

APPROPRIATION: "SUPPLIES, SERVICE, AND TRANSPORTATION, QUARTERMASTER CORPS"—Continued.

Class and purpose.	Fiscal year 1916.	Fiscal year 1915.	1916 less than 1915.	1916 greater than 1915.	Net re- duction.
Class IV, services:					
Miscellaneous.....	\$12,509.82	\$15,678.06	.....	.....	.....
Advertising.....	5,317.03	15,553.88	.....	.....	.....
Total Class IV.....	17,826.85	31,231.94	\$13,405.09	.....	.....
Fuel, forage, and mineral oil:					
Fuel (formerly R. S.).....	1,751,626.64	1,842,065.91	.....	.....	.....
Fuel for pumping plants.....	131,443.75	131,404.05	.....	.....	.....
Fuel for incinerators.....	34,989.45	19,936.74	.....	.....	.....
Blacksmith coal.....	5,251.40	8,629.26	.....	.....	.....
Forage and straw.....	3,264,670.65	3,121,440.45	.....	.....	.....
Mineral oil.....	48,014.98	63,873.46	.....	.....	.....
Total.....	5,235,996.87	5,187,349.87	.....	\$48,647.00	.....
Harbor boats, supplies and services:					
Fuel for harbor boats.....	209,331.63	232,408.00	.....	.....	.....
Repair of harbor boats.....	141,865.38	129,467.50	.....	.....	.....
Hire or charter of harbor boats..	23,529.41	18,127.50	.....	.....	.....
Water for harbor boats.....	16,401.94	13,317.40	.....	.....	.....
Class D, supplies.....	15,031.05	8,949.56	.....	.....	.....
Other vessels (Artillery) pur- chase of.....	357,877.93	51,012.50	.....	.....	.....
Total.....	764,037.34	453,282.46	.....	310,754.88	.....
Army Transport Service:					
Fuel.....	353,112.19	227,733.28	.....	.....	.....
Class A, supplies.....	161,906.00	143,197.20	.....	.....	.....
Class D, supplies.....	9,680.31	6,630.90	.....	.....	.....
Lifeboats.....	.....	79,260.00	.....	.....	.....
Water, stevedoring, pilotage, etc.	168,231.25	120,762.79	.....	.....	.....
Wireless equipment.....	.....	12,675.00	.....	.....	.....
Repair of transports.....	205,498.24	182,097.30	.....	.....	.....
Total.....	898,427.99	772,376.47	.....	126,051.52	.....
Miscellaneous:					
Strike, Colorado.....	.....	7,165.80	.....	.....	.....
Mexican border (supplies and services).....	7,853,352.56	2,485,283.34	.....	.....	.....
Militia, Federal service.....	977,091.50	.....	.....	.....	.....
Galveston stock.....	29,289.10	50,803.56	.....	.....	.....
Seeds, implements, and labor for raising forage at remount depots.....	5,837.54	5,455.43	.....	.....	.....
Sanitation, Canal Zone.....	48,250.00	28,967.00	.....	.....	.....
Care of post cemeteries.....	1,743.14	2,961.23	.....	.....	.....
Depot stock, maneuvers division.	.....	5,989.83	.....	.....	.....
Purchase of draft and pack ani- mals.....	92,502.75	47,384.20	.....	.....	.....
Purchase of railroad equipment..	.....	65,415.00	.....	.....	.....
Operation of railroad equipment.	9,999.26	8,536.18	.....	.....	.....
Autos and trucks, purchase of...	.....	34,360.49	.....	.....	.....
Autos and trucks, maintenance..	142,637.22	20,837.44	.....	.....	.....
Autos and trucks, hire of.....	1,078.85	.....	.....	.....	.....
Wagons, purchase of.....	.....	3,886.00	.....	.....	.....
Reserve stock (A. T.).....	128,276.77	.....	.....	.....	.....
Special expenditures (A. T.).....	2,575.02	.....	.....	.....	.....
Total.....	9,292,633.71	2,767,045.50	.....	6,525,588.21	.....
Total expenditures, United States.....	51,883,701.77	39,632,444.83	.....	12,251,256.94	.....
Apportioned the Philippine Islands for all purposes of the appropria- tion.....	5,699,723.02	4,920,718.75	.....	779,004.27	.....
Total United States and Phil- ippine Islands.....	57,583,424.79	44,553,163.58	.....	13,030,261.21	.....
Amount of the appropriation.....	42,524,364.33	40,685,430.36	.....	1,838,933.97	.....
Sundry credits to appropriation, sales, Treasury settlements, trans- fer from 1916-17, etc.....	10,893,771.08	4,187,889.75	.....	.....	.....
Total.....	53,418,135.41	44,873,321.11	.....	.....	.....
Unexpended balance.....	.....	320,156.53	.....	.....	.....
Deficit.....	4,165,289.38	.....	.....	.....	.....

Detailed expenditures of the Quartermaster Corps for the fiscal year ended June 30, 1916, itemized under different appropriations, as compared with cost for similar purposes, fiscal year 1915—Continued.

APPROPRIATION: "HORSES FOR CAVALRY, ARTILLERY, ENGINEERS, ETC."

Class and purpose.	Fiscal year 1916.	Fiscal year 1915.	1916 less than 1915.	1916 greater than 1915.	Net re- duction.
Class D: Purchase of horses, United States and Philippine Islands.....	\$639,327.51	\$347,146.82	.....	.....	.....
Class IV, services: Advertising, etc....	381.52	508.90	.....	.....	.....
Class I, services, personal: Civilian employees.....	37,952.77	36,835.33	.....	.....	.....
Miscellaneous:					
Mexican border.....	1,232,690.54	.....	.....	.....	.....
Militia, Federal service.....	161,315.00	.....	.....	.....	.....
Total expenditures.....	2,071,667.34	384,491.05	.....	\$1,617,176.29	.....
Amount of the appropriation.....	2,024,120.00	365,285.00	.....	1,658,835.00	.....
Received from sales, etc.....	76,525.75	25,824.93	.....	.....	.....
Unexpended balance.....	28,978.41	6,618.93	.....	.....	.....

APPROPRIATION: "BARRACKS AND QUARTERS."

Class A, supplies: Supplies to independent stations, tools, etc.....	.....	\$226.61	\$226.61	.....	.....
Class I, services, personal: Civilian employees.....	\$80,723.50	81,396.50	673.00	.....	.....
Class I, services, nonpersonal:					
Annual rentals, other than recruiting.....	175,080.43	404,622.47	.....	.....	.....
Rentals, recruiting.....	183,704.92				
Total Class I.....	358,785.35	404,622.47	45,837.12	.....	.....
Class II, services: Services, general...	575.00	8,185.92	7,610.92	.....	.....
Class IV: Advertising.....	1,447.24	1,518.78	71.54	.....	.....
Classes B and III: Annual repairs...	628,853.20	623,234.61	.....	\$5,618.59	.....
Miscellaneous:					
Minor new construction.....	197,244.69	61,153.30	.....	.....	.....
Refrigerators.....	45,967.37	14,517.01	.....	.....	.....
Screens, storm doors, etc.....	25,048.74	15,035.60	.....	.....	.....
Special repairs, alterations, etc....	216,882.95	151,480.30	.....	.....	.....
Wall lockers.....	22,613.61	31,267.15	.....	.....	.....
Furniture.....	24,864.53	4,389.31	.....	.....	.....
Library building, Fort Leavenworth, Kans.....	.....	53,440.68	.....	.....	.....
New construction.....	380,206.21	399,244.01	.....	.....	.....
Rostrum, national cemetery, Presidio of San Francisco.....	.....	5,835.15	.....	.....	.....
Philippine Islands.....	70,000.00	70,000.00	.....	.....	.....
Mexican border (supplies and services).....	43,318.58	164,004.53	.....	.....	.....
Strike, Colorado.....	.....	22,765.21	.....	.....	.....
Galveston stock.....	160.34	.....	.....	.....	.....
Militia, Federal service.....	29,731.15	.....	.....	.....	.....
Sundry debits to appropriation, account Treasury settlements, etc.....	5,577.24	.....	.....	.....	.....
Total.....	1,061,615.41	993,132.25	.....	68,483.16	.....
Total expenditures.....	2,131,999.70	2,112,317.14	.....	19,682.56	.....
Amount of the appropriation.....	2,098,858.00	2,123,997.00	25,139.00	.....	.....
Unexpended balance.....	.....	11,679.86	.....	.....	.....
Deficit.....	33,141.70	.....	.....	.....	.....

Detailed expenditures of the Quartermaster Corps for the fiscal year ended June 30, 1916, itemized under different appropriations, as compared with cost for similar purposes, fiscal year 1915—Continued.

APPROPRIATION: "MILITARY POST EXCHANGES."

Class and purpose.	Fiscal year 1916.	Fiscal year 1915.	1916 less than 1915.	1916 greater than 1915.	Net re- duction.
Class IV:					
Construction and equipment.....	\$16,322.81	\$118,464.36	.....	.....	.....
Maintenance.....	21,413.23				
Total United States.....	37,736.04	118,464.36	\$80,728.32	.....	.....
Apportioned the Philippine Is- lands.....	6,934.08	24,818.00	17,883.92	.....	.....
Total United States and Phil- ippine Islands.....	44,670.12	143,282.36	98,612.24	}.....	\$98,612.24
Amount of the appropriation.....	45,839.85	154,391.00	108,551.15		
Unexpended balance.....	1,169.73	11,108.64	.....	.....	.....

APPROPRIATION: "ROADS, WALKS, WHARVES, AND DRAINAGE."

Class I, services, personal: Civilian employees.....	\$3,917.50	\$3,475.00	.....	\$442.50	.....
Classes B and III:					
Care and improvement of grounds.....	38,854.35	30,792.90	.....	.....	.....
Drainage, repairs.....	26,920.29	31,909.64	.....	.....	.....
Roads, repair.....	101,935.64	98,126.03	.....	.....	.....
Walks, repair.....	22,806.93	18,453.50	.....	.....	.....
Wharves, repair.....	48,017.08	48,703.36	.....	.....	.....
Total.....	238,534.29	227,985.43	.....	10,548.86	.....
New construction and betterments:					
Drainage, projects.....	15,391.17	13,739.46	.....	.....	.....
Dredging channels.....	6,469.00	17,730.34	.....	.....	.....
Roads, construction.....	63,008.77	44,261.72	.....	.....	.....
Walks, construction.....	13,891.05	8,164.44	.....	.....	.....
Wharves, construction.....	44,591.50	4,884.88	.....	.....	.....
Total.....	143,351.49	88,780.84	.....	54,570.65	.....
Class IV: Advertising.....	131.19	366.64	\$235.45	.....	.....
Miscellaneous:					
Mexican border.....	112.00	6,086.19	.....	.....	.....
Militia, Federal service.....	2,000.00	.....	.....	.....	.....
Galveston stock.....	32.10	.....	.....	.....	.....
Total.....	2,144.10	6,086.19	3,942.09	.....	.....
Total expenditures, United States.....	388,078.57	326,694.10	.....	61,384.47	.....
Apportioned the Philippine Is- lands.....	209,896.00	156,052.50	.....	53,843.50	.....
Total United States and Phil- ippine Islands.....	597,974.57	482,746.60	.....	115,227.97	.....
Amount of the appropriation.....	600,000.00	485,000.00	.....	115,000.00	.....
Received from sales, Treasury settlements, etc.....	680.77	.....	.....	.....	.....
Unexpended balance.....	2,706.20	2,253.40	.....	.....	.....

APPROPRIATION: "MAINTENANCE ARMY WAR COLLEGE."

Class I, personal: Civilian employees.	\$5,700.00	\$5,700.00	.....	.....	.....
Class I, nonpersonal: Light.....	1,150.00	1,481.56	\$331.56	.....	.....
Class A: Fuel.....	3,000.00	3,369.00	369.00	.....	.....
Total expenditures.....	9,850.00	10,550.56	700.56	.....	\$700.56
Total of the appropriation.....	10,700.00	10,700.00	.....	.....	.....
Unexpended balance.....	850.00	149.44	.....	.....	.....

Detailed expenditures of the Quartermaster Corps for the fiscal year ended June 30, 1916, itemized under different appropriations, as compared with cost for similar purposes, fiscal year 1915—Continued.

Supplies, services, and transportation, Quartermaster Corps:	1916-17.
Militia, Federal service.....	\$5,821,180.00
Mexican border.....	295,286.61
Transportation accounts.....	339,000.00
Funds supplied on 1916 ledger accounts, etc.....	4,760,258.28
Total.....	11,215,724.89
Amount of appropriation.....	14,631,103.83
Balance.....	3,415,378.94
Horses for Cavalry, Artillery, Engineers, etc.:	
Purchase of horses.....	240,201.14
Militia, Federal service.....	7,307,966.00
Total.....	7,548,167.14
Amount of appropriation.....	8,025,965.00
Balance.....	477,797.86

EXHIBIT 6.

Philippine Islands account, fiscal year 1916

Appropriation.	Amount apportioned.	Apportionment funds remitted.	Funds remitted due on account of sales, Treasury settlements, etc.	Funds expended in the United States.	Total remitted and expended in United States, exclusive of amounts indicated in column 3.
Pay, etc., of the Army.....	\$6,564,754.00	\$6,487,754.00	.....	.....	\$6,487,754.00
Mileage to officers and contract surgeons.....	17,173.51	16,355.36	.....	.....	16,355.36
Supplies, services, and transportation, Quartermaster Corps.....	¹ 5,430,540.15	4,340,769.24	\$242,682.87	\$876,570.94	² 5,217,340.18
Horses for Cavalry, Artillery, Engineers, etc.....	3,030.73	3,030.73	.....	.....	3,030.73
Barracks and quarters, Philippine Islands.....	401,853.86	334,855.62	.....	66,998.24	401,853.86
Military post exchanges.....	6,934.08	6,104.52	.....	829.56	6,934.08
Roads, walks, wharves, and drainage.....	209,896.00	202,176.55	.....	7,638.90	209,815.45
Construction and repair of hospitals..	40,000.00	32,519.00	.....	7,479.87	39,998.87
Quarters for hospital stewards.....	1,000.00	1,000.00	.....	.....	1,000.00
Shooting galleries and ranges.....	10,264.19	10,264.19	.....	.....	10,264.19
Disposition of officers, soldiers, and civil employees.....	14,000.00	9,295.86	392.05	4,780.70	14,076.56
Barracks and quarters.....	50,000.00	50,000.00	.....	.....	50,000.00

¹ Of this amount \$1,673,000 is for local disbursement for subsistence of the Army. Subsistence supplies purchased in the United States not charged against apportionment.

² \$213,199.97 withheld to cover net debit Treasury transfer settlements, Philippine accounts.

The apparent overdraft is covered by net credit Treasury transfer settlements, Philippine accounts, which have not been remitted.

The amounts apportioned and remitted, appropriation "Horses for Cavalry, Artillery, Engineers, etc," are for local disbursements only.

EXHIBIT 7.

Mileage disbursements for the fiscal year ended June 30, 1916.

Duty.	Appropriations.		
	1914	1915	1916
Inspection of the Army:			
By generals commanding departments, accompanied by officers of their staffs, as provided by Army regulation 191.....			\$2,139.80
By generals commanding departments, accompanied by officers of their staff, as provided by Army regulation 193.....			1,007.28
By brigade commanders, as provided by Army regulation 194.....			1,535.98
By Coast Artillery district commanders, as provided by Army regulation 194.....		\$16.40	3,000.91
By officers of the General Staff.....			180.96
By officers of The Adjutant General's Department.....			471.06
By officers of the Inspector General's Department.....		256.50	13,126.90
By officers of the Quartermaster Corps.....		159.60	11,543.63
By officers of the Medical Department.....			560.40
By officers of the Corps of Engineers.....		14.40	1,023.43
By officers of the Ordnance Department.....			6,728.56
By officers of the Signal Corps.....		167.29	1,929.73
By officers of the Coast Artillery Corps.....			609.79
By officers of the Field Artillery.....			65.10
Inspection of—			
Colleges.....			1,882.21
Fortifications by officers of Corps of Engineers.....		9.12	77.70
Horses.....		32.27	760.36
Militia.....		41.16	9,184.98
Signal Corps equipment under General Order 146, War Department, 1911.....			100.39
Troops.....			214.67
Special inspection.....			173.24
Total for inspections.....		696.74	56,977.67
Alaskan Road Commission.....			921.56
Attending athletic exhibition.....			9.60
Attending conference on disposition of buildings at Panama-Pacific Exposition.....			409.92
Attending funerals.....			11.34
Attending joint Army and Navy conference.....			23.32
Attending meeting of Bureau of Standards.....			65.94
Attending meeting in connection with an exhibition of railway supplies and equipment.....			19.04
Attending military carnival.....			15.96
Attending National Guard Association.....			413.34
Attending Naval War College conference.....			32.14
Boards:			
On aeroplanes.....			359.16
On business men's camps.....			32.20
On Cavalry equipment and drill regulations.....			991.79
On examination of officers for assignment or promotion.....		481.15	10,525.79
On examination of gunners.....			284.82
On fire control and installation.....			535.76
On land defenses.....			635.25
On military posts and buildings.....			178.22
On plotting.....			80.22
On ordnance and fortifications.....			1,736.97
On quartermaster supplies.....			11.72
On retirement of officers.....		399.07	3,194.43
On special diseases.....			13.02
On target ranges.....			10.92
On testing guns.....			179.22
Joint Army and Navy boards.....			197.48
Change of station of officers of the staff departments.....	\$29.00	1,861.97	82,132.14
Change of station of officers of the line.....	62.31	9,014.65	190,667.81
Conducting prisoners.....		49.16	2,814.74
Conducting sick and insane.....		69.36	2,884.47
Consultation with bureau chiefs, department commanders, and others.....			926.90
Court-martial duty.....	18.83	135.94	10,683.11
Delivering lectures to schools and colleges.....			381.11
Horsemanship or walking tests.....		4.33	2,008.06
Instructions of Secretary of War (confidential duty).....			2,040.66
Leases and other legal business.....			284.54
Line officers on duty pertaining to Quartermaster Corps.....		15.12	2,672.00
Maneuvers and camps of instruction:			
Joint Army and militia camps.....		115.12	3,816.78
Militia camps.....			8,328.27
Regular Army camps.....		112.30	8,199.52
Payment of troops or securing funds.....		103.36	2,717.67

Mileage disbursement for the fiscal year ended June 30, 1916—Continued.

Duty.	Appropriations.		
	1914	1915	1916
Recruiting service:			
Conducting recruits.....		\$105.94	\$642.08
Joining station after assignment to recruiting duty.....			4,650.00
Regular recruiting travel.....		41.98	21,335.02
Relief from recruiting duty.....		29.82	2,060.48
Relief of Mississippi flood sufferers.....			352.23
Relief of storm sufferers near Texas City, Tex.....			113.12
Special investigations.....		104.40	2,006.97
Target practice.....		47.42	10,696.88
Topographical duty.....			2,001.26
Travel in connection with awarding of Knox Trophy.....		31.81	68.40
Travel in connection with expedition to China.....	\$2.28		630.56
Travel in connection with Panama-Pacific Exposition.....			1,424.73
Travel of dental surgeons to render dental treatment.....		100.58	1,669.27
Travel of generals and aids, not inspection.....			222.36
Travel of inspector-instructors, Organized Militia.....		64.12	9,873.91
Travel of military attachés after joining station and prior to relief from duty as attaché.....			1,283.93
Travel of officers detailed as military attachés in joining for duty and relief therefrom.....		23.36	4,008.57
Travel of officers detailed as military observers in joining for duty and relief therefrom.....		899.05	3,609.07
Travel of officers detailed to study Spanish.....		45.00	658.00
Travel of professors of Military Academy.....			194.04
Travel of officers to and from hospitals for medical treatment.....		324.79	12,655.90
Travel of Regular Army officers in connection with muster in of the National Guard.....			782.75
Witness before Senate Military Committee.....			486.19
Witness balloon test.....			61.32
Witness coast-defense exercises.....			134.80
Witness target practice.....			305.08
Duty not stated.....		40.55	21.42
Total disbursements by Quartermaster Corps.....	112.42	14,917.18	479,934.40
Total paid on Treasury Department settlements.....	60.24	6,028.42	35.16
Grand total.....	172.66	20,945.60	479,969.56

EXHIBIT 8.

Appropriations and expenditures for construction, repairs, rentals, fuel, etc., during fiscal year 1916.

Appropriations.	Available July 1, 1915.	Apportioned in fiscal year 1916.					Unapportioned balance June 30, 1916.
		New con- struction.	Repairs, alter- ations, etc.	Employees, rents, serv- ices, etc.	Supplies, equipment, etc.	Philippine Islands.	Total.
.....	\$2,067,558.00	\$535,557.98	\$859,985.92	\$520,688.77	\$121,428.85	\$10,000.00	\$2,047,661.42
.....	182,506.81	144,448.96	144,448.96	.....	.....	40,000.00	366,855.57
.....	12,500.00	324.85	10,722.48	.....	.....	1,000.00	12,047.33
.....	45,839.85	6,728.40	18,236.85	.....	12,810.92	6,711.85	44,488.02
.....	45,000.00	15,661.01	13,746.01	13,519.72	.....	10,264.19	43,190.93
.....	600,000.00	123,980.98	252,133.98	2,400.00	.....	209,896.00	588,420.96
Quartermaster	.....	.....	.....	.....	.....	.....	.....
.....	5,059,404.18	342,430.59	316,323.53	1,064,385.85	2,115,156.66	966,862.14	4,805,168.77
.....	45,987.00	.....	.....	32,639.10	.....	.....	32,639.10
.....	9,424.99	9,424.99	.....	1,741.00	2,409.00	.....	9,424.99
.....	5,000.00	.....	.....	.....	.....	.....	4,150.00
.....	188,808.27	180,151.91	.....	.....	.....	.....	180,151.94
.....	38,748.20	24,903.26	.....	.....	.....	.....	24,903.26
.....	58,834.90	26,315.61	.....	.....	.....	.....	26,315.61
.....	412,789.61	.....	.....	.....	.....	398,201.82	398,201.82
Hawaii	614,737.87	489,983.64	.....	.....	.....	37,151.31	527,134.95
.....	88,937.50	.....	.....	.....	.....	.....	.....
.....	2.10	.....	.....	.....	.....	.....	.....
Loyal, Va.	3,905.80	3,444.10	.....	.....	.....	.....	3,444.10
.....	1,290,000.00	2,110.32	.....	.....	.....	.....	2,110.32
Horses for Cavalry, Artillery, and Engineers, etc.	.....	.....	.....	.....	.....	.....	.....
Maintenance of clearings and trails, Canal Zone, Panama	.....	.....	.....	.....	.....	.....	.....
Canal	16,500.00	16,500.00	.....	.....	.....	.....	16,500.00
Water and sewers at military posts, 1915 and 1916	75,000.00	75,000.00	.....	.....	.....	.....	75,000.00
Total	11,071,038.59	2,015,034.16	1,615,567.73	1,625,384.44	2,251,805.43	1,681,067.31	9,188,909.09
							502,129.10

¹ For rentals only.

² For employees only.

³ Amount available for construction and repair division.

⁴ Includes fuel.

⁵ Available for expenditure after June 30, 1916.

⁶ Funds exp.

⁷ Purchase of

⁸ Improving

under direction of the Secretary of War.

I.

EXHIBIT 9.

Buildings constructed or in the course of construction in the United States, Alaska, and the Hawaiian Islands, from funds available in the fiscal year ended June 30, 1916, from the appropriations "Barracks and quarters" (B. & Q.), "Barracks and quarters seacoast defenses" (B. & Q., S. C. D.), "Military posts" (M. P.), "Philippine" (C. & R. of H.), "Military" (P. E.), "Military" (S. S. & T., Q. M. C.), "Encampment and maneuvers, Organized Militia" (E. & M.), and repair of hospitals (S. S. & T., Q. M. C.).

"Seacoast defenses, for the construction appropriation "Construction and Transportation, fiscal year 1916 was

Posts and buildings.	Material.	Division of cost.					Total cost for each building or buildings.	Total cost for each post.	Status of work on July 15, 1916.
		Building.		Fixtures.					
		Appropriation.	Cost.	Plumbing.	Heating.	Lighting.			
temporary	Wood.....	B. & Q.....	\$3,774.00	.....	.....	.....	\$3,774.00	\$3,774.00	Partially completed.
master and se.	do.....	S. C. P., P. I. & H.	600.00	.....	.....	.....	600.00	.....	Commenced February, 1916.
.....	.....	B. & Q.....	1,850.00	.....	.....	.....	1,850.00	2,450.00	Completed.
.....	Wood.....	M. P. E.....	2,445.00	.....	.....	.....	2,445.00	2,445.00	Commenced June 1916.
.....	do.....	B. & Q.....	900.00	.....	.....	.....	900.00	.....	Completed.
.....	.....	C. & R. of H.....	483.00	.....	.....	.....	483.00	1,383.00	Do.
.....	.....	B. & Q.....	1,675.01	.....	.....	.....	1,675.00	.....	Do.
.....	.....	do.....	3,948.00	.....	.....	.....	3,948.00	.....	Do.
Screening, etc., quarters and barracks.	Galvanized iron.	do.....	1,850.00	.....	.....	.....	1,850.00	.....	Do.
Granary.	do.....	do.....	5,800.00	.....	.....	.....	5,800.00	.....	Do.
Hay shed.	Brick.	C. & R. of H.....	14,157.20	3,190.00	1,200.00	1,291.00	18,918.20	.....	Expires July 23, 1916.
Annex to hospital.	.....	B. & Q.....	4,000.00	.....	.....	.....	4,000.00	.....	Commenced March 1916.
Remodeling kitchens of barracks.	Brick.....	do.....	5,600.00	800.00	.....	300.00	6,700.00	.....	Commenced April, 1916.
Pumphouse.	.....	.....	.....	.....	.....	.....	.....	.....	.....

Fixtures, \$96; wiring, \$195.

Buildings constructed or in the course of construction in the United States, Alaska, and the Hawaiian Islands, from funds available in the fiscal year ended June 30, 1916, from the appropriations "Barracks and quarters" (B. & Q.), etc.—Continued.

Posts and buildings.	Material.	Division of cost.					Total cost for each building or buildings.	Total cost for each post.	Status of work on July 15, 1916.
		Building.		Fixtures.					
		Appropriation.	Cost.	Plumbing.	Heating.	Lighting.			
Bism, Tex.—Continued.	Brick.....	C. & R. of H.....	\$7,350.00	\$2,700.00	\$1,000.00	\$115.00	\$11,165.00	.....	Commenced April, 1916.
Second-story addition, hospital ward.	Wood.....	B. & Q.....	4,000.00	.....	.....	.....	4,000.00	.....	Commenced May, 1916.
Enlarging 10 troop stables.....	do.....	do.....	5,846.00	.....	.....	.....	5,846.00	.....	Commenced June, 1916.
2 stables.....	do.....	do.....	934.00	170.00	.....	55.00	1,159.00	\$69,001.20	Do.
Radio station.....	do.....	do.....	.....	.....	.....	.....	.....	.....	Under construction.
Do Rusey, Hawaii:	do.....	S. C. D., P. I. & H.....	7,161.00	.....	.....	.....	7,161.00	.....	Do.
1 field officers' quarters.....	do.....	do.....	17,637.00	.....	.....	.....	17,637.00	.....	Do.
3 company officers' quarters.....	do.....	do.....	16,024.00	.....	.....	.....	16,024.00	.....	Do.
6 noncommissioned officers' quarters.	do.....	do.....	.....	.....	.....	.....	.....	.....	Do.
1 barracks, No. 18.....	do.....	do.....	20,500.00	.....	.....	.....	20,500.00	.....	Do.
1 barracks, No. 16.....	do.....	do.....	20,065.00	.....	.....	.....	20,065.00	.....	Do.
Guardhouse.....	do.....	do.....	3,628.00	.....	.....	.....	3,628.00	.....	Do.
Dispensary.....	do.....	do.....	4,412.00	.....	.....	.....	4,412.00	.....	Do.
Administration building.....	do.....	do.....	10,073.00	.....	.....	.....	10,073.00	98,500.00	Do.
Islanded.....	Stucco.....	B. & Q.....	9,145.00	1,636.00	575.00	792.00	12,148.00	12,148.00	Commenced June, 1916.
....., Va.:	Brick.....	do.....	3,848.00	85.00	.....	55.00	3,989.00	3,989.00	Do.
10 stable sheds.....	Wood.....	do.....	2,300.00	.....	.....	.....	2,300.00	.....	Do.
Fire station.....	do.....	do.....	1,950.00	.....	.....	.....	1,950.00	.....	Completed.
.....	Tile.....	Off. Qrs., Ft. Royal R. D.	3,400.00	250.00	.....	.....	3,650.00	7,900.00	Under construction.
Honolulu, Hawaii:	Wood.....	C. & R. H.....	1,175.00	.....	.....	.....	1,175.00	.....	Commenced April, 1916.
.....	do.....	B. & Q.....	5,500.00	.....	.....	.....	5,500.00	6,675.00	Commenced June, 1916.
..... and Signal Corps property.	.....	.....	.....	.....	.....	.....	.....	.....	.....
Huachuca, Ariz.:	.....	do.....	15,000.00	1,237.00	.....	770.00	16,007.00	.....	Completed.
Remodeling 4 frame barracks.....	.....	do.....	626.00	.....	.....	.....	626.00	.....	Do.
Quarters, superintendent engineering, power and ice plant.	.....	do.....	.....	.....	.....	.....	.....	.....	.....
Administration building.....	Tile.....	do.....	8,585.00	431.00	1,250.00	443.47	10,684.67	.....	Commenced June, 1916.

.....do.....	17,925.00	2,000.00	1,372.51	21,925.51	Do.
.....do.....	11,507.00	.....	588.53	12,095.53	Do.
.....do.....	12,900.00	1,974.00	500.27	15,000.27	Do.
.....S. C. D., P. I. & H.....	20,900.00	.....	.....	23,900.00	Under construction.
.....do.....	1,300.00	.....	.....	1,300.00	Completed.
.....do.....	7,140.00	.....	.....	7,140.00	Under construction.
.....do.....	7,410.00	.....	.....	7,410.00	Do.
.....do.....	8,440.00	.....	.....	8,440.00	Do.
.....do.....	3,483.00	.....	.....	3,483.00	Do.
.....do.....	5,710.00	.....	.....	5,710.00	Do.
.....do.....	60,552.00	.....	.....	60,552.00	Completed.
.....do.....	11,000.00	.....	.....	11,000.00	Under construction.
.....do.....	48,000.00	.....	.....	48,000.00	Do.
.....do.....	4,000.00	.....	.....	4,000.00	Do.
.....do.....	16,200.00	.....	.....	16,200.00	Completed.
.....do.....	600.00	.....	.....	600.00	Under construction.
.....do.....	400.00	.....	.....	400.00	Do.
.....do.....	8,000.00	.....	.....	8,000.00	Do.
.....do.....	3,800.00	.....	.....	3,800.00	Completed.
.....do.....	5,400.00	.....	.....	5,400.00	Do.
.....do.....	8,000.00	.....	.....	8,000.00	Under construction.
.....do.....	900.00	.....	.....	900.00	Do.
.....do.....	2,000.00	.....	.....	2,000.00	Do.
.....do.....	2,000.00	.....	.....	2,000.00	Do.
.....do.....	3,000.00	.....	.....	3,000.00	Do.
.....do.....	2,000.00	.....	.....	2,000.00	Do.
.....B. & Q.....	6,000.00	.....	.....	6,000.00	Commenced May, 1916.
.....S. C. D., P. I. & H.....	1,800.00	.....	.....	1,800.00	Do.
.....do.....	14,000.00	.....	.....	14,000.00	Completed.
.....do.....	1,200.00	.....	.....	1,200.00	Commenced May, 1916.
.....do.....	600.00	.....	.....	600.00	Do.
.....do.....	108,372.60	.....	.....	108,372.60	.....
.....B. & Q.....	2,112.60	554.00	.....	2,667.60	Under construction.
.....do.....	3,546.52	.....	.....	3,546.52	Commenced May, 1916.

Fixtures, \$45; wiring, \$70.

Division of cost unknown.

Deduct \$2,971 for emission of grading around building.

Buildings constructed or in the course of construction in the United States, Alaska, and the Hawaiian Islands, from funds available in the fiscal year ended June 30, 1916, from the appropriations "Barracks and quarters" (B. & Q.), etc.—Continued.

Ports and buildings.	Material.	Division of cost.					Total cost for each building or buildings.	Total cost for each post.	Status of work on July 15, 1916.	
		Building.		Cost.	Fixtures.					
		Appropriation.			Plumbing.	Heating.				Lighting.
Barracks: Dormitory, addition B, Nurse Corps. Oil-burning system, cooking addition B, Nurse Corps dormitory.	Brick.....	C. & R. of H..... Military prison, Fort Leavenworth.	8000.00 21,140.00				3800.00		31,400.00 21,140.00	Completed. Under construction.
	Concrete.....	C. & R. of H.....	12,913.00		33,410.00	900.00		3793.00	13,221.00	Expires August, 1916. Under construction.
	.....	S. S. & T, Q M.C.	1,044.00						1,044.00	Completed.
	Concrete.....	C & R. of H.....	2,733.00		440.00			362.40	3,733.40	Commenced June, 1916. Do. Do.
	do.....	do.....	13,202.00		2,300.00	1,105.00		1,233.00	19,840.00	
	do.....	do.....	17,537.00 325.00		495.00	250.00		591.50	18,872.50 325.00	
	.....	B. & Q.....	2,490.00						2,490.00	Under construction.
	.....	do.....	336.00						336.00	Commenced June, 1916.
	Concrete.....	B & Q.....	5,000.00		3,674.55	600.00		125.00	28,159.55	Completed. Under construction.
	do.....	do.....	17,200.00		500.00				2,000.00	Do.
	do.....	do.....	1,501.00						30,159.55	
	Wood.....	do.....	3,038.81						3,038.81	Do. Completed. Under construction.
	Brick.....	do.....	760.73						760.73	
	.....	do.....	5,845.82		715.00	320.00		296.00	6,976.82	Completed.
	Wood.....	do.....	490.91						490.91	Completed.

REPORT OF THE QUARTERMASTER GENERAL.

Buildings constructed or in the course of construction in the United States, Alaska, and the Hawaiian Islands, from funds available in the fiscal year ended June 30, 1916, from the appropriations "Barracks and quarters" (B. & Q.), etc.—Continued.

Material	Division of cost.					Total cost for each building or buildings.	Total cost for each post.	Status of work on July 15, 1916.
	Building.		Fixtures.					
	Appropriation.	Cost.	Plumbing.	Heating.	Lighting.			
Wood.....	B. C. D. P. I. H....	\$3,420.00				\$3,420.00	\$3,420.00	Commenced June, 1916.
.....	B. & Q.....	1,118.06	\$3,833.30			4,951.36		Completed.
Stone.....	.....do.....	3,200.52				3,200.52		Do.
Galvanized iron.....	.....do.....	9,947.00				9,947.00		Do.
Wood.....	.....do.....	2,947.00			\$45.00	2,992.00		Do.
.....	.....do.....	3,884.00	236.00		1,116.00	5,236.00		Do.
.....	C. & R. H.....	5,872.00				5,872.00		Expires June, 1916.
Brick.....	S. B. T.....	911.00				911.00		Commenced May, 1916.
.....do.....	C. & R. H.....	1,894.00				1,894.00		Expires July, 1916.
.....do.....	.....do.....	17,137.00	2,532.00	\$2,089.00	\$590.00	22,358.00		Commenced June, 1916.
.....	B. & Q.....	2,392.00				2,392.00		Completed.
Galvanized iron.....	.....do.....	3,689.00				3,689.00		Commenced June, 1916.
Wood.....	.....do.....	3,598.00				3,598.00		Do.
.....	C. & R. H.....	5,275.00				5,275.00		Completed.
Wood.....	B. & Q.....	42,800.00				42,800.00		Commenced June, 1916.
.....	C. & R. H.....	11,438.00	499.00		\$177.00	12,114.00		Do.
Brick.....	.....do.....	17,147.00	2,442.00	1,553.00	\$734.00	21,876.00		Do.
.....do.....	.....do.....	17,847.00	1,872.41	1,220.00	\$740.00	21,479.41		Do.
.....	B. & Q.....	1,011.35				1,011.35	171,852.63	Completed.
Wood.....	.....do.....	1,809.16				1,809.16	1,809.16	Do.
Concrete.....	M. P.....	10,000.00				10,000.00		Under construction.
.....	M. P. E.....	800.00				800.00		Completed.
Post. Completion of swimming tank.....								

Post.
Completion of swimming tank.....

R. & Q.	1,013.49				1,013.49	Do.
do.	381.41				381.41	Do.
M. P.	141,285.64				141,285.64	Under construction.
B. & Q.	1,412.76				1,412.76	Do.
do.	4,577.68				4,577.68	Do.
do.	2,000.00				2,000.00	Completed.
do.	15,000.00				15,000.00	Under construction.
do.	1,000.00				1,000.00	Do.
do.	2,191.84	877.59			3,069.43	Commenced June, 1916.
do.	601.00	67.50			668.50	Commenced May, 1916.
Q. H. S.	324.85			20.00	324.85	Completed.
C. & R. H.	5,905.00				5,905.00	Under construction.
B. & Q.	590.39				590.39	Completed.
do.	3,294.00				3,294.00	Expires June, 1916.
do.	1,179.74				1,179.74	Completed.
do.	2,500.00				2,500.00	
do.	500.00				500.00	Do.
do.	1,798.50				1,798.50	Do.
do.	1,095.00	35.00		80.00	1,210.00	Do.
do.	7,250.00	1,725.00	1,485.00	570.00	11,030.00	Commenced June, 1916.
do.	1,075.00				1,075.00	Completed.
do.	700.00				700.00	Commenced June, 1916.
do.	973.80				973.80	Completed.
B. Q. S. C. D.	12,540.00	1,100.00	915.00	346.00	14,951.00	Commenced June, 1916.
do.	12,225.00	1,500.00	1,450.00	373.00	15,548.00	Under construction.
B. & Q.	428.00				428.00	Completed.
C. & R. H.	2,618.00				2,618.00	Under construction.
B. & Q.	561.75				561.75	Completed.

* Fixtures, \$200; wiring, \$450.
 * Fixtures, \$200; wiring, \$320.

* Fixtures, \$22; wiring, \$85.
 * Fixtures, \$331; wiring, \$405.

* Fixtures, \$250; wiring, \$480.
 * Division of cost unknown.

EXHIBIT 10.

CHANGES IN MILITARY RESERVATIONS OTHER THAN THOSE MADE BY PURCHASE.

Fort Armstrong, Hawaii.—The following tracts of land have been transferred by Executive Order No. 2323, dated February 21, 1916, from the Navy Department to the War Department:

Tract No. 1. Esplanade lots Nos. 63, 64, 65, 66, 67, and 68, containing 30,000 square feet, approximately.

Tract No. 2. Beginning at the south corner of Richards Street and Halekauwila Street, containing 5.69 acres, approximately.

Tract No. 3. Beginning at the southeast corner of Richards Street and Halekauwila Street, containing 38,120 square feet, approximately.

Tract No. 4. Beginning at the south corner of Halekauwila Street and Mililany Street, containing 5,728 square feet, approximately.

Tract No. 5. United States Naval Wharf No. 1, on Allen Street, on the foot of Richards Street.

Tract No. 6. Beginning at the north corner of immigration station reservation on Channel street, containing about 22.41 acres.

Fort Bayard, N. Mex.—Executive Order No. 2393, of June 5, 1916, released sections of land set aside for reservations for military purposes by Executive Order Nos. 1954, dated June 6, 1914, and 1927, dated May 2, 1914, and turned same back to the Department of the Interior.

Fort Brown, Tex.—Executive Order No. 2377, of May 2, 1916, restored this military reservation to the control of the War Department.

Coos Bay, Oreg.—Executive Order No. 2233, of August 6, 1915, withdraws from settlement, location, sale, etc., and sets apart for military purposes a tract of land adjoining 32.06 acres on the south side of entrance to Coos Bay, Oreg., described as lot No. 4.

Camp Eldridge, P. I.—Executive Order No. 2316, dated February 14, 1916, sets aside a certain tract of land at Los Banos, Province of Laguna, island of Luzon, as an addition to this reservation.

Emmes Wharf Site, Hawaii.—Executive order dated March 6, 1916, No. 2335, restores to the Territory of Hawaii the Emmes wharf site and the Esplanade lots, and sets aside as a Government reservation the tract known as the Territorial Immigration Station.

Esplanade lots, Hawaii.—See preceding paragraph.

Henry Barracks, P. R.—Executive Order No. 2322, dated February 21, 1916, transfers from the War Department to the Navy Department, for use as a naval radio station and for other naval purposes, all that piece or parcel of land situated just east of the town of Aibonito, P. R., where the barracks now stand, containing 175,570 square feet, more or less.

Letterman General Hospital, Cal.—Transfer of a small triangular plot of ground between the hospital and the main road from the Presidio reservation to the Letterman General Hospital reservation.

Pettit Barracks, P. I.—Executive Order No. 2234, dated August 13, 1915, reserves for military purposes the "Corral Pettit Barracks Military Reservation," situated in the municipality of Zamboanga, containing an area of 28,639 square meters.

Fort Rosecrans, Cal.—Executive Order No. 2328, of February 25, 1916, retransfers to the War Department that portion of the naval reservation at Point Loma that lies southerly and westerly of a line beginning at a concrete monument, No. 1, containing approximately 159.4 acres, and transfers to the Navy Department that portion of the military reservation on Point Loma that lies northerly and easterly of a line beginning at a concrete monument, No. 4, containing approximately 57.8 acres.

EXHIBIT 11.

REVOCABLE LICENSES, PERMITS, AND LEASES GRANTED BY THE WAR DEPARTMENT DURING THE FISCAL YEAR 1916 (SO FAR AS SHOWN BY THE RECORDS OF THIS OFFICE).

Fort Armistead, Md.—Permission to the Department of Commerce to build a timber walkway from the Brewerton Channel range front light station to the shore, said approach to extend from the military reservation to the light station mentioned. Date, January 26, 1916.

Augur Barracks, P. I.—Revocable license to the municipality of Jolo, District of Sulu, P. I., to construct and maintain a road 15 meters wide, across and through a portion of the reservation. Dated August 4, 1915.

Fort Baker, Cal.—Revocable license to the Pacific Gas & Electric Co., dated September 2, 1915, to erect and maintain pole line for the transmission of electric current. Payment of \$1,000 per annum to be made to the quartermaster at the Presidio of San Francisco.

Fort Benjamin Harrison, Ind.—Lease dated October 15, 1915, to Madison Thomas of approximately 40 acres of the reservation for agricultural purposes, for the term beginning October 15, 1915, and ending August 31, 1916. The lessee is required to pay the United States 20 per cent of the wheat and straw harvested, the straw to be baled and stored.

Revocable license, December 16, 1915, to Indianapolis Council of Boy Scouts of America, to occupy a site on the reservation for camping purposes, during the period commencing January 1, 1916, and ending December 31, 1916.

Fort Bliss, Tex.—Revocable license, March 9, 1916, to the El Paso & Southwestern Railroad Co., to maintain and construct railway spurs and sidings and to operate such trains thereon as may be necessary for purposes of the Government.

Boise Barracks, Idaho.—Permission, December 30, 1915, to the Department of the Interior for use of building No. 51 to enable the assistant supervisor of surveys to make repairs to winter equipment of the surveying service.

Revocation of permit granted October 27, 1914, to Department of Agriculture to use Cavalry stable building No. 34. Revocation dated December 24, 1915.

Permission, May 25, 1916, for the use of the Cavalry stable No. 49 for stabling the visiting teams of polo horses on the occasion of the polo tournament to be held in Boise beginning May 30, 1916.

Fort Canby, Wash.—Revocable license, November 4, 1915, to the Ilwaco Telephone & Telegraph Co. to erect and maintain a line of poles at this post, following the Government road north to North Head.

Fort D. A. Russell, Wyo.—Revocable license, dated November 30, 1915, to the city of Cheyenne to use the high-tension transmission line on the military reservation to the electric substation on the reservation.

Revocable license, dated October 15, 1915, to the Mountain States Telephone & Telegraph Co., for right of way for telephone and telegraph line through the reservation.

Lease, October 26, 1915, to the Pacific Market Co., for cutting hay and grazing stock for the term beginning January 1, 1916, and ending with June 30, 1916. Rental, \$400.

Revocable license, January 6, 1916, to the city of Cheyenne, amending paragraph 2 of license of November 30, 1915, so as to read: "That the electric light line shall not be used by the licensee for the purpose of supplying current for the development of power between the hours of 5 p. m. and 11 p. m. and between the hours of 5 a. m. and 8 a. m. each day."

Revocable license, June 10, 1916, to the Cheyenne Electric Railway Co., to construct a loop at the end of their electric railway.

Revocable license, June 10, 1916, to the Mountain States Telephone & Telegraph Co., to construct and maintain a temporary building, with a lean-to for horses, on the target and maneuver reservation.

Columbus Barracks, Ohio.—Permission, April 24, 1916, to Capt. G. W. Biegler to install a citizens telephone in his quarters, provided proper care was taken not to deface the building when the installation was made.

Fort Crook, Nebr.—Lease, dated April, 8, 1916, to Herman Platt, of the post gardens, about 50 acres. Rental, \$8.51 per acre.

Esplanade Lots, Hawaii.—Revocable license to the city and county of Honolulu (Jan. 10, 1916) to construct, maintain, and operate a 24-inch pipe line across these lots.

Fort Flagler, Wash.—Permission, April 26, 1916, to Serg. William Smith to connect his residence with the water system, provided connections are made and meter installed without expense to the Government.

Fort Hancock, N. J.—Revocable license, August 5, 1915, to the New York Telephone Co. of Newark, N. J., for the purpose of supplying commercial telephone service to the United States reservation, including the Sandy Hook Proving Ground. The amount to be paid annually for the privilege is \$100 instead of \$50 as provided in license granted December 16, 1914.

Henry Barracks, P. R.—Revocable license, May 31, 1916, to Fernando Perez to lay and use a temporary portable railroad track for hauling sugar cane across that portion of the reservation near the target range.

Fort Huachuca, Ariz.—Revocable license, February 1, 1916, to the El Paso & Southwestern system to extend a spur track to the electric light, power, and ice plant.

Jefferson Barracks, Mo.—Revocable license, March 16, 1916, to city of St. Louis, to straighten and change location of southern end of road leading to Koch Hospital.

Fort Leavenworth, Kans.—Lease, dated September 23, 1915, to John Schmidt for grazing privileges for term beginning October 1, 1915, and ending June 30, 1916. Rental, \$150.

Permission, May 9, 1916, to the Department of Justice for the use of 50 acres of land on the Fort Leavenworth Reservation for the use of the penitentiary for farming purposes.

Fort Logan, Colo.—Lease, March 8, 1916, to R. T. Hawkey of the Fort Logan target range at Parker, Colo., for one year. Rental, \$260.

Revocable license, May 15, 1916, to the Cherry Creek Telephone Co., to string telephone wires upon the posts of the Government fence.

Fort McHenry, Md.—Permission, December 6, 1915, to the mayor of Baltimore for the extension of a spur track upon the reservation to reach the immigration station in course of construction, track to be removed after completion of structure.

Permission to the governor of the State of Maryland, March 13, 1916, to use and occupy barracks No. 3, the commissary storehouse, and the stables, and to use the grounds of the reservation for drill purposes by the field artillery of the State Militia.

Madison Barracks, N. Y.—Permission, December 8, 1915, to Mrs. D. M. Anderson, Sacket Harbor, N. Y., to continue to use and purchase surplus water from the post mains. This permission is given under the same conditions as governed the former owner of the residence, Mrs. Nellie Powell Koehler.

Revocable license, March 11, 1916, to the board of education, village of Sacketts Harbor, N. Y., to obtain surplus water, not exceeding 1,000 gallons per day, for the use of the public school of the village.

Fort Marion, Ala.—Revocable license, October 16, 1915, to the St. Augustine Historical Society and Institute of Science to occupy and use rooms Nos. 9, 10, and 11 on the west side of the central court, in addition to rooms Nos. 1 and 2, and room C, occupied under revocable license of November 20, 1914, as modified by revocable license dated February 1, 1915.

Fort Mills, P. I.—Permission, December 22, 1915, to the municipal authorities of Cavite Province, for the erection of a temporary building upon land owned by the United States in the military varrio of San Jose for the offices of municipal justice of the peace and barrio teniente.

Moanalua, Hawaii.—Revocable license, November 4, 1915, to the Hawaiian Electric Co. to erect and maintain a pole line and to string wires thereon for the transmission of electrical light and power.

Fort Monroe, Va.—Revocable license, November 1, 1915, to Charlotte Taylor Evans, widow of the late Rear Admiral R. D. Evans, to maintain in its present location and for the occupancy of the present tenant as a residence the cottage erected under license of the said Rear Admiral Evans.

Permission, August 14, 1915, granted by the Secretary of War that a portion of the Eldredge property be made available for the purposes of the Treasury Department.

Fort Myer, Va.—Revocable license, dated November 17, 1915, to the Washington-Virginia Railway Co. to construct and maintain a passenger station at Hatfield Junction.

Fort Niagara, N. Y.—Permission, April 27, 1916, to the Buffalo Chapter U. S. Daughters of 1812 to place a bronze tablet on the old castle at this fort, which will indicate the most important incidents in the history of this old castle.

Fort Omaha, Nebr.—Revocable license, August 2, 1915, to the Nebraska Telephone Co. to make such installations of private telephones in quarters, etc., as may be required by post authorities.

Omaha Depot, Nebr.—Permission, September 17, 1915, to the Mendelssohn Choir of Omaha to use the third floor of the Army Building for holding its rehearsals.

Fort Pickens, Fla.—Revocation of license, September 13, 1915, to Mr. H. H. Thornton to occupy and use in connection with pavilion bathhouses, etc., a strip of land approximately 500 by 600 feet. Original license dated September 24, 1908.

License dated December 9, 1915, five years at \$5 per year, to Benjamin P. Edmundson & Son, for the purpose of operating and maintaining thereon a public bathing establishment, with hotel and dancing pavilion, etc., and in connection therewith to maintain a temporary wharf and to improve said bathing pavilion. These premises were formerly occupied by him under revocable license dated January 26, 1911.

Fort Pike, La.—Permit, July 28, 1915, to the city of New Orleans to construct and maintain a highway across this reservation.

Lease, November, 1915, to Jahncke Navigation Co. for reservation, with permission to erect temporary clubhouse. Rental, \$35 per annum. Mr. C. A. Hassler assigned his leasehold to Jones S. Irvine, who in turn assigned it to Jahncke Navigation Co.

Pittsburg Storage and Supply Depot, Pa.—Permission granted Bureau of Mines, January 14, 1916, to erect two new temporary storehouses, make an extension to testing house, and erect new testing gallery.

Permission, March 31, 1916, to the Bureau of Standards to lay 4-inch cast-iron main to their furnace building (No. 38).

Fort Porter, N. Y.—Lease for a period of five years from April 1, 1916, a certain portion of this reservation, about 1.12 acres. Instrument dated March 16, 1916, and calls for the payment of \$100 per year rental.

Potomac Highway Bridge, Va.—License, May 24, 1916, to H. Rozier Dulany, Washington, D. C., to enter upon and fill in to the approximate level of road such of the Government land pertaining to the right of way for the highway bridge and Arlington roadway as has not yet been filled, at the south end of the highway bridge.

Presidio of San Francisco, Cal.—Revocable license, September 2, 1915, to the Pacific Gas & Electric Co. to locate cable house on this reservation, and to extend pole line across Fort Baker, \$1,000 to be paid for the privilege.

Revocable license, March 6, 1916, to the Pacific Telephone & Telegraph Co. to erect and maintain three poles on this military reservation in order to connect its telephone system with the life-saving station near Fort Point.

Revocable license, dated June 8, 1916, to the Y. M. C. A. to erect and maintain a temporary building on the reservation, it being understood that steps will be taken by the licensee to raise funds for more permanent buildings, and that work on said permanent structure will be commenced within three years from the date of this license.

Fort St. Michael, Alaska.—Revocable license dated August 10, 1915, to Patrick Coffey, covering the building known as Mess House, situated upon a tract of ground 22 feet front by 60 feet deep, which premises were formerly occupied by Robert E. Flynn under revocable license dated March 31, 1915. Mr. Coffey purchased the rights of Mr. Flynn.

License, September 16, 1915, to Alexander Stevens to occupy a tract of land on the reservation and to maintain and occupy thereon for residential purposes the building erected under War Department license dated October 28, 1908, to John A. Tilly, the license to the latter being revoked.

License, January 17, 1916, to Frank P. Williams, formerly a member of the firm of Traeger & Williams, he having acquired from Traeger, the other member of the firm, by instrument dated June 28, 1915, all his right, title, and interest in and to the business, buildings, and other property of said firm.

Fort Sam Houston, Tex.—Permission withdrawn November 24, 1915, to Miss Katherine Stinson, aviator, to use hangars, etc., for storing her aeroplane. By same instrument permission also withdrawn to Mr. R. E. Wagner covering similar use.

Revocable license of January 17, 1916, to San Antonio Gas & Electric Co. to build pole line across the reservation for supplying the new aviation post with electric current.

San Diego, Cal.—Revocable license, December 2, 1915, to the Atchison, Topeka & Santa Fe Railway Co. to maintain its wharf, known as the "Long Wharf," in the harbor of San Diego, where it extends across certain submerged lands of the United States.

License, December 31, 1915, to Janus Bros., renewed for one year, and which now expires December 31, 1916. This covers the occupation and use of that portion of the reservation known as the "Wharf Lot," situated near the foot of California Street, for the purpose of harboring and launching flying boats.

San Juan, P. R.—Permission by the Secretary of War, August 16, 1915, to the Governor of Porto Rico for the construction of a jury room on the roof of the building occupied by the District Court of San Juan and known as Santo Domingo Barracks, the title of which is in the War Department.

San Pedro Military Reservation, Cal.—Revocable license of December 4, 1915, to the Southern Pacific Railway Co. to maintain and operate its railway lines across the military reservation in Los Angeles County, Cal.

Schofield Barracks, Hawaii.—Revocable license of April 20, 1916, to Second Lieut. Dexter C. Rumsey, Fourth Cavalry, to build a garage of frame construction in rear of quarters, No. 1013, Artillery-Cavalry cantonment.

Fort Sheridan, Ill.—Permission, November 17, 1915, to the Illinois Field Artillery, Battery C, to occupy gun shed and barracks.

Permission, December 31, 1915, to the same organization to occupy stables (to use south half of stable No. 98).

Fort Sill, Okla.—Revocable license to the Lawton Lighting & Railway Co. dated July 16, 1915, to connect the waiting stations on the line of its electric railway across the reservation with the electric lighting, water, and sewerage systems of the post.

Fort Snelling, Minn.—License dated August 11, 1915, to the Twin City Rapid Transit Co. to construct a double-track extension of its electric railroad along the northern and western boundary of the reservation.

New license dated August 24, 1915, to the same company and for the same purpose as above, except that the center line of the proposed extension will be located 35 feet from the boundary line of the reservation. In the instrument of August 11, 1915, the center line was 16½ feet.

Permission, December 15, 1915, to the Field Artillery of the State of Minnesota to use and occupy Artillery Barracks.

Fort Standish, Mass.—Permission, March 4, 1916, to the Lighthouse Service to install at its own expense an independent pipe line.

Fort Terry, N. Y.—Permission granted April 11, 1916, to D. Milton Rackett, who is engaged in the lobstering business on Long Island Sound, to land his boat at the dock on Plum Island during stormy weather.

Fort Thomas, Ky.—Lease dated March 9, 1916, to John Schmidt of the target range belonging to this post; rental \$100 per annum.

Tobyhanna, Pa.—License dated August 10, 1915, to Thomas Brady to flood and submerge certain lands.

Lease dated May 3, 1916, to Tobyhanna Rod and Gun Club of 1 acre, about one-third of a mile below the club house, for a yearly rental of \$1,

Vancouver Barracks, Wash.—Permission dated April 22, 1916, to the Portland Railway Light & Power Co. for permission to install an additional electric light line. This company purchased the electric light line of the Mount Hood Railway Light & Power Co.

Fort Walla Walla, Wash.—Revocable license of August 9, 1915, to the Commercial Club of Walla Walla to occupy for hospital purposes the porch of barracks No. 69 and the rear part of the old band quarters, and to keep cows and one horse in stable No. 31.

Lease dated March 24, 1916, to C. S. Norman of certain portions of the military reservation for the term of one year from the 1st of April, 1916. Rental, \$1,255 per year.

Fort Washington, Md.—Relinquishment to the War Department, August 21, 1915, by the Commerce Department, of old brick building at Fort Washington Light Station, used by the Lighthouse Service by virtue of license granted by the War Department of November 8, 1882.

West Point, N. Y.—Permission, August 12, 1915, to the board of commissioners of the Palisades Interstate Park to erect bridge and approaches upon reservation of Popolopen Creek, which was acquired by the Government for the protection of the water supply at West Point.

Revocable license of January 12, 1916, to the same people to construct dams on Queensboro Brook, in order to impound the water of the said brook and create artificial basins or lakes with the double purpose of conserving the water flowing from the territory drained by said brook and adding to the natural beauty of said territory.

Whipple Barracks, Ariz.—Revocation of license, November 4, 1915, to the Prescott & Mount Union Railway Co. to construct, operate, and maintain a line of electric railway. License was granted to the company on June 26, 1905.

Revocable license of November 4, 1915, to Thomas H. Hager to remove certain old copper (trolley) wire acquired by him from the creditors of the Prescott & Mount Union Railway Co.

Permission, March 2, 1916, to the board of supervisors of this county to relocate a portion of the county road passing through this reservation.

Fort William Henry Harrison, Mont.—Permission dated August 12, 1915, by the Secretary of War to the Helena Country Club to put in an entrance to the porch on the south end of the bachelor officers' quarters.

EXHIBIT 12.

Statement showing quantities of clothing and equipage to be kept in field supply depot No. 1 and quantities remaining on hand in that depot June 30, 1916.

Articles.	To be kept in stock.	Total in depot June 30, 1916.
Breeches, service, cotton, foot.....pairs..	52,672	.....
Breeches, service, cotton, mounted.....do....	9,000	.....
Breeches, service, wool, foot.....do....	48,128	.....
Breeches, service, wool, mounted.....do....	9,000	.....
Chevrons, olive-drab wool.....do....	24,563	.....
Coats, wool, olive-drab.....	60,000	.....
Cords, hat.....	66,412	.....
Drawers, jean.....pairs..	157,500	.....
Gloves, olive-drab, wool.....do....	98,772	.....
Hats, service.....	40,971	.....
Leggins, canvas, N. P.....pairs..	32,706	.....
Overcoats, olive-drab, without hoods.....	64,324	.....
Shirts, flannel, olive-drab.....	86,297	.....
Shoes, marching, russet.....pairs..	164,897	.....
Stockings, cotton.....do....	25,935	.....
Stockings, woolen, light weight.....do....	300,677	.....
Stockings, woolen, heavy.....do....	10,000	.....
Sweaters, olive-drab, N. P.....	.....	.....
Tags, identification.....	106,370	.....
Tape, for above tags.....yards..	106,693	.....
Undershirts, cotton.....	180,512	.....
EQUIPAGE.		
Bags, surplus kit.....	6,538	.....
Blankets, woolen, olive-drab, light weight.....	71,717	.....
Brassards.....	801	.....
Brushes, tooth.....	50,690	50,690
Combs, medium.....	50,690	.....
Elbows, stovepipe, tent.....	1,183	.....
Flies, tent, storage.....	252	.....
Flies, tent, wall, small.....	1,183	.....
Headnets, mosquito.....	122,338	122,338
Oil, neat's-foot.....gallons..	1,496	.....
Pins, tent:		
Large.....	228,310	.....
Small.....	235,179	.....
Shelter, aluminum.....	290,886	.....
Poles, tent:		
Pyramidal, large.....	7,339	.....
Wall, small, ridge.....	1,183	.....
Wall, small, upright.....	2,366	.....
Shelter.....	17,464	.....
Storage, set.....	252	.....
Ranges, field, No. 1, complete with alamo attachments.....	606	606
Ranges, field, No. 2, complete.....	165	165
Soap, toilet, 1 ounce cakes.....	50,690	50,690
Stoves, tent.....	18,834	18,834
Stovepipe, tent, joints.....	134,787	42,337
Tents:		
Pyramidal, large.....	7,339	.....
Wall, small.....	1,183	.....
Shelter, halves, N. P.....	59,977	.....
Storage.....	252	.....
Towels, huckaback.....	50,690	50,690
Tripods.....	7,339	.....
Whistles, N. P.....	10,723	.....

EXHIBIT 13.

Statement showing number of National Guard and Organized Militia moved to Mexican border from each State prior to Aug. 1, 1916.

Organization.	Total strength.	Date leaving mobilization camp.	Destination.
Arizona: 1 regiment infantry.....	915	May 11.....	Douglas, Ariz.
California: 1 brigade (3 regiments Infantry), 1 squadron Cavalry, 1 battalion Field Artillery, 1 company Signal Corps, 1 ambulance company, 1 field hospital.	4,487	June 29-July 4....	Nogales, Ariz.
Connecticut: 2 regiments Infantry, 1 squadron Cavalry, 1 battery Field Artillery, 1 company Signal Corps, 1 ambulance company, field hospital.	2,186	June 27-June 29...	Do.
Recruits.....	866	July 11.....	
	3,052		
Delaware: 2 battalions Infantry.....	572	July 26.....	Deming, N.Mex.
District of Columbia: 1 separate battalion Infantry, 1 company Signal Corps, 1 field hospital.	500	July 4.....	Bisbee, Ariz.
Idaho: 1 regiment Infantry.....	1,145	July 7.....	Nogales, Ariz.
Illinois: 2 brigades Infantry (3 regiments each), 2 battalions Field Artillery, 1 company Engineers, 1 company Signal Corps, 2 field hospitals.	7,904	June 28-July 4....	San Antonio, Tex.
1 regiment Cavalry.....	1,233	July 1.....	Brownsville, Tex.
	9,137		
Indiana: 3 regiments Infantry, 1 battalion Field Artillery, 1 company Signal Corps, 1 ambulance company, 2 field hospitals.	3,502	July 6-July 12....	Mercedes, Tex.
Iowa: 1 brigade Infantry (3 regiments), 1 battalion Field Artillery, 1 company engineers, 1 ambulance company, 1 field hospital.	4,247	July 20-July 25....	Brownsville, Tex.
1 squadron Cavalry.....	267	July 23.....	Donna, Tex.
	4,514		
Kansas: 2 regiments Infantry, 1 battery Field Artillery, 1 company Signal Corps.	2,231	July 1-July 7.....	Eagle Pass, Tex.
Louisiana: 1 regiment Infantry..... 1 troop Cavalry..... 1 battalion Field Artillery.....	1,619	July 18-July 20....	{ San Benito, Tex. Mercedes, Tex. Do.
Maine: 1 regiment Infantry.....	1,043	June 29.....	Laredo, Tex.
Maryland: 1 brigade Infantry (3 regiments), 1 troop Cavalry, 1 ambulance company, 1 field hospital.	3,189	June 30-July 5....	Eagle Pass, Tex.
Massachusetts: 1 brigade Infantry (3 regiments), 1 separate regiment Infantry, 1 squadron Cavalry, 1 regiment Field Artillery, 1 company Signal Corps, 1 ambulance company, 1 field hospital.	5,031	June 27-June 28...	El Paso, Tex.
Recruits.....	2,268	July 10-July 26....	
	7,299		
Michigan: 2 regiments Infantry.....	2,556	July 8-July 14.....	Do.
Minnesota: 1 brigade Infantry (3 regiments), 1 battalion Field Artillery.	3,725	July 10-July 19....	Mercedes, Tex.
Missouri: 1 brigade Infantry (3 regiments), 1 separate regiment Infantry, 1 troop Cavalry, 1 battalion Field Artillery, 1 company Signal Corps, 1 ambulance company, 1 field hospital.	4,802	June 30-July 9....	Laredo, Tex.
Montana: 1 regiment Infantry.....	990	July 2.....	Douglas, Ariz.

Statement showing number of National Guard and Organized Militia moved to Mexican border from each State prior to Aug. 1, 1916—Continued.

Organization.	Total strength.	Date leaving mobilization camp.	Destination.
Nebraska: 2 regiments Infantry, 1 company Signal Corps, 1 field hospital.	1,910	July 7-July 9.....	Mercedes, Tex.
New Hampshire: 1 regiment Infantry.....	909	July 15.....	Laredo, Tex.
New Jersey: 1 brigade Infantry (3 regiments), 1 squadron Cavalry, 2 batteries Field Artillery, 1 company Signal Corps, 1 ambulance company, 1 field hospital.	4,087	June 26-July 2....	Douglas, Ariz.
New Mexico: 1 regiment Infantry, 1 troop Cavalry.....	754	May 11.....	Columbus, N. Mex.
New York: 1 division, including 3 brigades of 3 regiments each, Infantry; 1 regiment and 1 squadron and 1 machine-gun troop Cavalry, 2 regiments Field Artillery, 2 battalions Engineers, 1 battalion Signal Corps, 4 ambulance companies, 2 field hospitals..	16,729	June 27-July 15...	Brownsville district, Tex.
North Dakota: 1 regiment Infantry.....	1,085	July 22.....	Mercedes, Tex.
Oklahoma: 1 regiment Infantry, 2 troops Cavalry, 1 field hospital.	1,594	July 19.....	San Benito and Donna, Tex.
Oregon: 1 regiment Infantry, 1 troop Cavalry.....	1,236	June 27-June 29...	San Diego, Cal.
1 battery Field Artillery.....	179	June 28.....	Calxico, Cal.
	1,415		
Pennsylvania: 1 division, including 3 brigades of 3 regiments each of Infantry; 1 regiment Cavalry, 1 regiment Field Artillery, 2 companies engineers, 1 battalion signal Corps, 2 ambulance companies, 2 field hospitals.	12,998	June 29-July 9....	El Paso, Tex.
Rhode Island: 4 troops Cavalry, 1 battery Field Artillery, 1 ambulance company.	655	June 30-July 9....	Do.
South Dakota: 1 regiment Infantry.....	1,016	July 31.....	San Benito, Tex.
Texas: 3 regiments Infantry, 1 squadron Cavalry, 1 battery Field Artillery, 1 field hospital.	3,876	May 11.....	San Antonio, Tex.
Utah: 2 squadrons Cavalry, 1 battery Field Artillery, 1 field hospital.	779	June 27-July 14...	Nogales, Ariz.
Vermont: 1 regiment Infantry.....	906	June 27.....	Eagle Pass, Tex.
Virginia: 2 regiments Infantry.....	1,898	July 6.....	Brownsville, Tex.
Washington: 1 regiment Infantry, 1 troop Cavalry, 1 company Signal Corps.	2,071	June 30-July 4...	Calxico, Cal.
Wisconsin: 1 brigade Infantry (3 regiments), 1 troop Cavalry, 1 battery Field Artillery, 1 field hospital.	4,009	July 1-July 13.....	San Antonio, Tex.
Grand total	111,919		

EXHIBIT 14.

Principal movements of troops for strictly military purposes, changes of station, etc., with cost of each movement.

[No movement less than one troop, battery, or company reported.]

Engineers:	
Company B, First Battalion, Fort Screven, Ga., to Washington Barracks, D. C.....	\$3,000.00
Second Battalion, San Antonio, Tex., to El Paso, Tex.....	4,866.80
Company C, First Battalion, New York, N. Y., to Washington, D. C.....	486.00
Company F, Second Battalion, Santa Rosa, Cal., to Vancouver Barracks, Wash.....	790.66
Company D, First Battalion, Plattsburg Barracks, N. Y., to Tarrytown, N. Y., and return.	690.86
Company D, First Battalion, Plattsburg Barracks, N. Y., to Washington, D. C.....	867.21
Company D, First Battalion, Washington, D. C., to Plattsburg Barracks, N. Y.....	1,848.48
Company A, First Battalion, Washington, D. C., to Portsmouth, N. H.....	2,675.75
Company B, First Battalion, Washington, D. C., to Fort Screven, Ga.....	2,126.45
Company C, First Battalion, Washington, D. C., to Fort Oglethorpe, Ga.....	2,041.00
Company C, First Battalion, Fort Oglethorpe, Ga., to Fort Sam Houston, Tex.....	2,924.69
Company D, First Battalion, Washington, D. C., to Plattsburg Barracks, N. Y.....	1,864.69

*Principal movements of troops for strictly military purposes, changes of station, etc., with cost of each movement—Continued.***Engineers—Continued.**

Second Battalion, Galveston, Tex., to San Antonio, Tex.....	\$1,525.88
Company Engineers, Lowell, Mass., to Harrisville, R. I.....	196.49
Company Engineers, Bourne, Mass., to Washington, D. C.....	453.55
Battalion Engineers, El Paso, Tex., to Columbus, N. Mex.....	1,198.39
Company G, Fort Bliss, Tex., to Columbus, N. Mex.....	1,691.85
First Cavalry:	
Troop B, San Diego to Calexico, Cal.....	No cost.
Troop M, San Diego to Calexico, Cal.....	No cost.
Headquarters Band, machine-gun troop, and Troops C, E, F, G, H, and I, Presidio of Monterey, Cal., to Douglas, Ariz.....	24,797.00
Troops A, D, K, and L, Fort Rosecrans, Cal., to Douglas, Ariz., and pack train No. 12....	10,884.57
Troop A, Calexico, Cal., to San Diego, Cal.....	No cost.
Troop K, Calexico, Cal., to San Diego, Cal.....	No cost.
Second Cavalry:	
Troop A, Fort Myer, Va., to Fort Oglethorpe, Ga.....	1,656.00
1 squadron, Fort Ethan Allen, Vt., to Springfield, Mass.....	5,248.00
1 squadron, Fort Ethan Allen, Vt., to Fort Myer, Va.....	8,336.66
2 troops, Fort Ethan Allen, Vt., to Plattsburg Barracks, N. Y.....	284.50
5 troops, Fort Ethan Allen, Vt., to Plattsburg Barracks, N. Y.....	600.00
Second Squadron, Plattsburg Barracks, N. Y., to Fort Ethan Allen, Vt.....	346.75
Fifth Cavalry:	
First Squadron, Fort Sheridan, Ill., to Columbus, N. Mex.....	15,331.10
Headquarters Band and Troops I, K, L, and M, Fort Myer, Va., to Columbus, N. Mex..	18,978.00
Second Squadron, Fort Leavenworth, Kans., to Columbus, N. Mex.....	12,261.75
Sixth Cavalry: All, Galveston to Harlingen, Tex.....	
Seventh Cavalry:	
All, except Troops A, B, and C, San Francisco, Cal., to Douglas, Ariz.....	16,714.11
Troops A, B, and C, San Francisco, Cal., to Hachita, N. Mex.....	5,504.89
Eighth Cavalry:	
All, San Francisco, Cal., to Fort Bliss, Tex.....	14,544.98
Troop B, Fort Bliss, Tex, to Fabens, Tex.....	56.75
Troop C, Fort Bliss, Tex., to Fort Hancock, Tex.....	86.65
Troop D, Fort Bliss, Tex., to Sierra Blanca, Tex.....	156.00
Two troops, Fort Bliss, Tex., to Marathon, Tex.....	894.40
Eleventh Cavalry:	
All, Fort Oglethorpe, Ga., to El Paso, Tex.....	56,909.20
All, El Paso, Tex., to Columbus, N. Mex.....	9,846.00
Twelfth Cavalry:	
First Squadron, Mercedes, Tex., to Galveston, Tex.....	3,345.05
Headquarters Band, Troops F and G, and machine-gun troop, Fort Robinson, Nebr., to Columbus, N. Mex.....	17,570.33
First Squadron, Cristobal, C. Z., to Corozal, C. Z.....	281.60
Troops E and H, Twelfth Cavalry, Fort D. A. Russell, Wyo., to Columbus, N. Mex.....	7,103.55
Third Squadron, Fort Meade, S. Dak., to Hachita, N. Mex.....	30,572.09
Fifteenth Cavalry: All, Fort Bliss, Tex., to San Francisco, Cal., en route to the Philippine Islands.....	
Second Field Artillery:	
Battery C, San Antonio, Tex., to Anniston, Ala.....	2,914.64
Regulation Headquarters, and Battery B, F, and A, San Antonio, Tex., to Sparta, Wis..	6,734.39
Third Field Artillery:	
Headquarters and Battery B, Camp Robinson, Sparta, Wis., to Fort Sam Houston, Tex.	3,782.72
Band and Battery A, Camp Robinson, Sparta, Wis., to Fort Sheridan, Ill.....	1,967.00
Battery A and band, Fort Sheridan, Ill., to Fort Sam Houston, Tex.....	5,121.42
Battery D, Plattsburg Barracks, N. Y., to Harrisburg, Pa.....	1,885.57
Fourth Field Artillery:	
All, El Paso to Fort Bliss, Tex., en route from Galveston, Tex.....	100.00
Battery D, Fort Bliss to Harlingen, Tex.....	7,049.90
First Battalion, Fort Bliss, Tex., to Columbus, N. Mex.....	6,127.00
Second Battalion, Fort Bliss to Galveston, Tex., en route to Canal Zone.....	11,455.00
Fifth Field Artillery:	
Battery A, Fort Sill, Okla., to El Paso, Tex.....	5,340.45
Battery B, Fort Sill, Okla., to Brownsville, Tex.....	6,788.41
Battery E, Fort Sill, Okla., to Brownsville, Tex.....	6,955.08
Battery E, Fort Sill, Okla., to El Paso, Tex.....	7,772.36
Battery D, Fort Sill, Okla., to Brownsville, Tex.....	6,997.48
Battery F, Fort Sill, Okla., to Brownsville, Tex.....	6,997.48
Battery B, Fort Sill, Okla., to El Paso, Tex.....	5,340.45
Battery C, Fort Sill, Okla., to El Paso, Tex.....	6,982.62
Sixth Field Artillery:	
Battery D, Fort Riley, Kans., to Nogales, Ariz.....	11,464.05
Battery B, Gilling, Cal., to Douglas, Ariz.....	6,400.79
Coast Artillery Corps:	
Thirteenth Band, San Diego, Cal., to San Francisco, Cal., en route to Honolulu, Hawaii..	283.35
Thirteenth Company, San Diego, Cal., to Port Townsend, Wash., en route to Fort Worden, Wash.....	1,637.88
One hundred and sixtieth Company, San Diego, Cal., to Fort Stevens, Oreg.....	1,128.15
Thirty-third Company, Fort Columbia, Wash., to San Francisco, Cal., en route to Manila, P. I.....	611.57
Twenty-seventh Company, Fort Winfield Scott, Cal., to Presidio of Monterey, Cal.....	No cost.
One hundred and forty-seventh Company, Fort Winfield Scott to Presidio of Monterey, Cal.....	No cost.
Seventy-fourth Company, Fort Screvens, Ga., to Fort Sam Houston, Tex.....	2,288.92
One hundred and sixty-seventh Company, New York, N. Y., to Laredo, Tex.....	5,234.42
One hundred and first, One hundred and sixty-fifth, and One hundred and sixty-seventh Companies, Fort Totten, N. Y., to Governors Island, N. Y.....	Transport.

Principal movements of troops for strictly military purposes, changes of station, etc., with cost of each movement—Continued.

Coast Artillery Corps—Continued.

Eighty-seventh Company, Fort Totten, N. Y., to Panama Canal.....	Transport
Forty-sixth and One hundred and forty-first Companies, Fort Strong, Mass., to Fort Sam Houston, Tex.....	\$8,064.00
First, Fifth, Eighth, Twenty-fourth, Thirty-seventh, Forty-ninth, Fiftieth, Fifty-first, Eighty-ninth, One hundred and seventh, and One hundred and fifty-fourth Companies, Fort Williams, Me., to Camp White, Gambo Falls, Me., and return.....	475.00
Eighth Company, Fort McKinley, Me., to New York City, N. Y., en route to Fort Grant, Canal Zone.....	349.12
Twenty-fourth, Forty-ninth, and Eighty-ninth Companies, Fort Williams, Me., to Plattsburg Barracks, N. Y.....	1,710.21
Second Band, Fort Williams, Me., to Plattsburg Barracks, N. Y.....	176.19
First and One hundred and fifty-fourth Companies, Fort McKinley, Me., to Fort Sam Houston, Tex.....	10,928.28
Second Company, Fort H. G. Wright, N. Y., to San Francisco, Cal.....	5,736.04
One hundredth Company, Fort H. G. Wright, N. Y., to Plattsburg Barracks, N. Y.....	920.22
One hundred and twenty-fifth Company, Fort H. G. Wright, N. Y., to San Francisco, Cal.....	5,907.88
One hundred and thirty-fourth Company, Fort H. G. Wright, N. Y., to Eagle Pass, Tex.....	5,262.36
One hundred and forty-sixth Company, Fort H. G. Wright, N. Y., to Eagle Pass, Tex.....	5,262.36
Company, Fort Rodman, Mass., to Fort Terry, N. Y.....	25.00
Two companies, Newport, R. I., to Plattsburg Barracks, N. Y.....	2,014.36
Two companies, Newport, R. I., to Eagle Pass, Tex.....	8,964.39
Twentieth and Seventy-seventh Companies, Fort Barrancas, Fla., to Fort Sam Houston, Tex.....	2,902.02
Thirty-first Company, Fort Caswell, N. C., to Fort Sam Houston, Tex.....	2,508.82
One hundred and twenty-seventh Company, Fort Crockett to Fort Sam Houston, Tex.....	579.00
One hundred and twelfth and One hundred and thirty-ninth Companies, Delaware City, Del., to Fort Monroe, Va., and return.....	1,156.48
Fourth and Thirty-sixth Companies, Delaware City, Del., to San Francisco, Cal., en route to Manila, P. I.....	14,871.60
One hundred and twelfth Company, Delaware City, Del., to San Antonio, Tex.....	2,353.49
Thirty-second Company, Fort Baker, Cal., to Presidio of Monterey, Cal.....	No cost.
One hundred and sixty-first Company, Fort Barry, Cal., to Presidio of Monterey, Cal.....	No cost.
Sixty-third Company, Fort Worden, Wash., to Fort George Wright, Wash.....	707.15
Ninety-third Company, Fort Stevens, Oreg., to Vancouver Barracks, Wash.....	248.58
Ninety-fourth Company, Fort Flagler, Wash., to Fort Lawton, Wash.....	4.90
One company, Fort Hancock, N. J., to Laredo, Tex.....	4,777.58
One company, Fort Howard, Md., to Fort Monroe, Va., and return.....	650.00
One company, Fort Howard, Md., to El Paso, Tex.....	3,740.00
Forty-seventh Company, Fort Hunt, Va., to Fort Monroe, Va.....	100.00
Seventeenth Company, Fort Hunt, Va., to San Francisco, Cal., en route to Manila, P. I.....	3,885.00
One hundred and sixty-fourth Company, Jackson Barracks, La., to Fort Sam Houston, Tex.....	1,500.00
Three companies, Boston, Mass., to Plattsburg Barracks, N. Y.....	1,868.68
Forty-first and Sixty-ninth Companies, Fort Oglethorpe, Ga., to Fort Sam Houston, Tex.....	3,063.32
Eight companies and band, Fort Monroe, Va., to Phoenix, Md., and return.....	4,178.70
Four companies, Fort Monroe, Va., to Fort Oglethorpe, Ga.....	5,126.00
One hundred and forty-fifth Company, Fort Moultrie, S. C., to Fort Sam Houston, Tex.....	2,375.95
Sixtieth and Thirty-eighth Companies, San Francisco, Cal., to San Diego, Cal.....	2,962.26
Provisional Battalion and Provisional Field Battery, San Francisco, Cal., to Calexico, Cal.....	8,707.52
Third Infantry:	
First Battalion, Malone Junction, N. Y., to Oswego, N. Y.....	1,022.98
Second and Third Battalion, Malone Junction, N. Y., to Sacket Harbor, N. Y.....	2,728.82
Two companies, First Battalion, Fort Ontario, N. Y., to Ludington, Mich.....	1,082.00
First Battalion, Fort Ontario, N. Y., to Eagle Pass, Tex.....	11,778.76
Band, Sacket Harbor, N. Y., to Ludington, Mich.....	590.74
Machine-gun company, Sacket Harbor, N. Y., to Indiana, Pa.....	317.65
Machine-gun company, Indiana, Pa., to Sacket Harbor, N. Y.....	308.51
All, Sacket Harbor, N. Y., to Eagle Pass, Tex.....	25,080.14
Fourth Infantry: All, Galveston to Brownsville, Tex.....	11,368.52
Sixth Infantry: All, El Paso, Tex., to Columbus, N. Mex.....	5,922.90
Seventh Infantry:	
All, Galveston, Tex., to El Paso, Tex.....	23,755.14
All, El Paso, Tex., to Fort Bliss, Tex.....	100.00
(En route from Galveston, Tex.)	
All, Fort Bliss, Tex., to Douglas, Ariz.....	11,856.50
Fourteenth Infantry:	
Headquarters, band, and Second Battalion, Fort Lawton, Wash., to Douglas, Ariz.....	12,771.43
Third Battalion, Fort George Wright, Wash., to Douglas, Ariz.....	15,744.19
Sixteenth Infantry: All, El Paso, Tex., to Columbus, N. Mex.....	5,653.00
Nineteenth Infantry:	
Company E, Fort Sheridan, Ill., to Fort Sill, Okla.....	1,237.37
Companies E and H, Fort Sill, Okla., to Spofford, Tex.....	2,614.56
Companies A and B, San Antonio, Tex., to Del Rio, Tex.....	631.50
Nineteenth Infantry, Galveston to Del Rio, Tex., Third Battalion.....	3,645.22
Headquarters, First Battalion, and Companies F and G, Galveston to San Antonio, Tex.....	4,170.80
Companies E and H, Galveston, Tex., to Fort Sill, Okla.....	1,907.96
Twentieth Infantry:	
All, Fort Bliss, Tex., to Douglas, Ariz.....	11,308.00
First Battalion, Fort Bliss, Tex., to Columbus, N. Mex.....	1,306.45
Companies E and F, El Paso, Tex., to Deming, N. Mex.....	708.40
Companies E and F, Deming, N. Mex., to El Paso, Tex.....	708.00
Twenty-first Infantry:	
Company K, San Francisco, Cal., to Vancouver Barracks, Wash.....	833.54
Company K, Vancouver Barracks, Wash., to Presidio of San Francisco, Cal.....	320.95
Third Battalion, Vancouver Barracks, Wash., to El Centro, Cal.....	4,572.88
Headquarters, and Second Battalion, Vancouver Barracks, Wash., to Yuma, Ariz.....	5,432.20

*Principal movements of troops for strictly military purposes, changes of station, etc., with cost of each movement—Continued.***Twenty-first Infantry—Continued.**

Company C, Vancouver Barracks, Wash., to Nogales, Ariz.....	\$1,871.07
Machine Gun Company, Vancouver Barracks, Wash., to Calexico, Cal.....	616.22
Third Battalion, El Centro, Cal., to Calexico, Cal.....	No cost.
Band, Camp at San Diego, Cal., to Yuma, Ariz.....	226.80
Companies A, B, and D, San Diego, Cal., to Nogales, Ariz.....	6,427.48

Twenty-fourth Infantry:

All, San Francisco, Cal., to Fort D. A. Russell, Wyo.....	54,198.43
All, Fort D. A. Russell, Wyo., to Columbus, N. Mex.....	53,838.25
Companies B and C, Fort Bliss, Tex., to Columbus, N. Mex.....	1,969.45

Twenty-sixth Infantry: All, Galveston, Tex., to Brownsville, Tex.....	9,249.45
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Twenty-ninth Infantry: Company A, Culobra, C. Z., to Corozal, C. Z.....	13.40
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Thirtieth Infantry:

Company A, Plattsburg Barracks, N. Y., to Burlington, Vt.....	45.06
Machine-gun company, Plattsburg Barracks, N. Y., to Burlington, Vt.....	45.59
All, Plattsburg Barracks, N. Y., to San Antonio, Tex.....	26,368.66

Signal Corps:

Company A, Fort Leavenworth, Kans., to Fort Sheridan, Ill.....	1,849.92
Company A, Fort Sheridan, Ill., to Weehawken, N. J.....	2,551.36
First Aero Squadron, San Diego, Cal., to Fort Sill, Okla.....	7,604.41
First Aero Squadron, Fort Sill, Okla., to San Antonio, Tex.....	1,037.17
First Aero Squadron, San Antonio, Tex., to Columbus, N. Mex.....	3,958.00
Second Aero Squadron, First Company, San Diego, Cal., to San Francisco, Cal., en route to Manila, P. I.....	412.28

Medical Corps:

Ambulance Company No. 1 and Field Hospital Company No. 1, Camp McCoy, Sparta, Wis., to North Platte, Nebr.....	3,610.50
Ambulance Company No. 1 and Field Hospital Company No. 1, North Platte, Nebr., to Camp McCoy, Sparta, Wis.....	3,610.50
Ambulance Company No. 1 and Field Hospital Company No. 1, Fort D. A. Russell, Wyo., to El Paso, Tex.....	4,994.05
Ambulance Company No. 2 and Field Hospital Company No. 2, Presidio of San Francisco, Cal., to Presidio of Monterey, Cal.....	No cost.
Ambulance Company No. 2 and Field Hospital Company No. 2, Presidio of Monterey, Cal., to Douglas, Ariz.....	4,703.07
Ambulance Company No. 3 and Field Hospital Company No. 3, El Paso, Tex., to Columbus, N. Mex.....	934.50
Field Hospital No. 3, Texas City to Fort Bliss, Tex.....	1,408.95
Ambulance Company No. 6 and Field Hospital Company No. 6, Plattsburg Barracks, N. Y., to Fort Ethan Allen, Vt.....	87.59
Ambulance Company No. 6 and Field Hospital Company No. 6, Fort Ethan Allen, Vt., to Plattsburg Barracks, N. Y.....	363.00
Ambulance Company No. 6 and Field Hospital Company No. 6, Plattsburg Barracks, N. Y., to Fort Sam Houston, Tex.....	5,285.63
Ambulance Company No. 7 and Field Hospital Company No. 7, San Antonio, Tex., to Columbus, N. Mex.....	3,858.00

Miscellaneous:

Provisional Wagon Company No. 1, Galveston to El Paso, Tex.....	1,364.55
131 officers and cadets from West Point, N. Y., to Gettysburg, Pa., and return.....	2,066.26
129 officers and cadets, West Point, N. Y., to Watervliet, N. Y., and return.....	354.75

Total..... 949,218.00

EXHIBIT 15.*Statement showing special movements of troops in connection with labor strikes, parades, dedications, celebrations, etc., with cost of such movements.***Coast Artillery Corps:**

Nineteenth Company, Fort Caswell, N. C., to Guilford Court House July 4 celebration.....	\$960.00
One company, Fort Wadsworth, N. Y., to Cypress Hills Cemetery, Brooklyn, N. Y., Memorial Day parade.....	8.20
One hundred and forty-fifth Company and Seventy-eighth Company, Fort Moultrie, S. C., to Columbia, S. C., State fair.....	No cost.
Provisional company and depot band, Fort Slocum, N. Y., to New Rochelle, N. Y., and return, Memorial Day parade.....	No cost.
Four companies, Fort Totten, N. Y., to Governors Island, N. Y., Memorial Day parade.....	No cost.
Five companies, Fort Totten, N. Y., to Sandy Hook Proving Ground, N. J., Memorial Day parade.....	No cost.
One hundred and fifty-fourth and One hundred and fifty-fifth Companies, Fort Williams, Me., to Portland, Me., July 4 parade.....	No cost.
First, Fifth, Eighth, Twenty-fourth, Thirty-seventh, Forty-ninth, Fiftieth, Fifty-first, Eighty-ninth, One hundred and seventh, One hundred and fifty-fourth, One hundred and fifty-fifth Companies, participated in war-condition period in Boston Harbor.....	No cost.
Second band, First and Fifth Companies, Fort Williams, Me., to Portland, Me., Memorial Day parade.....	No cost.
Thirty-seventh and Fifty-first Companies, Fort Williams, Me., to Portland, Me., centennial parade.....	No cost.
Twenty-ninth Infantry: Company G, Culobra to Corozal, Canal Zone, funeral ceremony.....	24.00

Miscellaneous:

From Washington Barracks, D. C.—	
Eight funerals at Arlington Cemetery, 240 street-car tickets.....	10.00
Band concerts, Washington, D. C., by Engineer Band, 8,451 street-car tickets.....	375.35
Detachments to Chevy Chase in connection with Women's Camp, 504 street-car tickets.....	21.00

Total..... 1,398.55

EXHIBIT 16.

Operations of the transportation division of the Quartermaster Corps in the Hawaiian Islands.

FREIGHT AND PASSENGERS TRANSPORTED.

	By railroad.	By commercial vessels.	By wagon or stage.	By express.	Total.
Passengers:					
Officers.....	110	42			152
Enlisted men.....	10,334	53			10,387
Civilians.....	814				814
Total.....	11,258	95			11,353
Horses.....	2	158			160
Stores:					
Quartermaster..... tons.....	64,026	66	25	1	64,118
Ordnance..... do.....	1,347		1		1,348
Medical..... do.....	18				18
Engineer..... do.....	10				10
Signal..... do.....	26	3	6		35
Miscellaneous..... do.....	307	38	8		353
Total.....	65,734	107	40	1	65,882
Funds.....				\$180,987.10	\$180,987.10

STATEMENT SHOWING PRINCIPAL MOVEMENTS OF TROOPS FOR STRICTLY MILITARY PURPOSES, CHANGE OF STATION, ETC., WITH COST OF EACH MOVEMENT.

Two battalions, Second Infantry, annual training of troops.....	\$314.00
Second Infantry, annual practice march.....	205.40
Second Infantry and Field Company E, Signal Corps, mapping and reconnoitering.....	212.88
Total.....	732.28

SPECIAL MOVEMENTS OF TROOPS IN CONNECTION WITH PARADES, DEDICATIONS, LABOR STRIKES, ETC., WITH COST OF SUCH MOVEMENTS.

February 22, 1916, a provisional battalion consisting of detachments of Tenth, Fifty-fifth, One hundred and fifth, and One hundred and fifty-ninth Companies, Coast Artillery Corps, coast defenses of Oahu, participated in parade at Honolulu, Hawaii, in honor of the anniversary of the birth of George Washington.

February 21 to 26, 1916, First and Twenty-fifth Infantry, Fourth Cavalry, and First Field Artillery, less the necessary guard and fatigue, from Schofield Barracks, Hawaii, participated in the Mid-Pacific Carnival at Honolulu, Hawaii.

No cost to the Government in connection with the above movements.

EXHIBIT 16½.

Operations of the transportation division of the Quartermaster Corps in the Philippine Islands.

FREIGHT AND PASSENGERS TRANSPORTED.

	By railroad.	By commercial vessels.	By wagon or stage.	By express.	Total.
Passengers:					
Officers.....	266	12	1		279
Enlisted men.....	7,528	40			7,568
Civilians.....	125	9			134
Total.....	7,919	61	1		7,981
Animals:					
Horses.....	639				639
Mules.....	140	16			156
Total.....	779	16			795
Stores (tons):					
Quartermaster.....	20,199	345	2,504	14	23,062
Ordnance.....	210	1	5		216
Medical.....	31	1	3	1	36
Engineer.....	1	1			2
Signal.....	36		1		37
Miscellaneous.....	267	6			273
Total.....	20,744	354	2,513	15	23,626
Funds.....	\$200,518.65	\$41,139.22			\$241,657.87
Remains.....	2			3	5

Principal movements of troops for strictly military purposes, changes of station, etc., with cost of each movement.

shan, China.....	\$127.71
tain, China.....	127.71
shan, China.....	119.97
tain, China.....	127.71
shan, China.....	127.71
tain, China.....	89.01
han, China.....	160.28
tain, China.....	143.19
by E, Manila to port of Manila, P. I.....	3.48
by M, Manila to Dagupan, Pangasinan, P. I.....	101.18
to Camp Stotsenburg, P. I.....	477.79
Total.....	1,605.68

EXHIBIT 17.

Weight of baggage (including household goods and personal effects) and professional books transported at public expense for officers, noncommissioned officers, and civilian employees, with cost of shipment and cost of packing and crating; also weight of baggage shipped in excess of authorized allowance at the expense of the owner.

UNITED STATES (INCLUDING ALASKA, CANAL ZONE, AND HAWAII).

	Baggage shipped at public expense.	Professional books shipped at public expense.	Baggage in excess of allowance at expense of owner.
	Pounds.	Pounds.	Pounds.
Officers.....	11,963,788	1,532,398	1,080,080
Noncommissioned officers.....	2,011,115	10,307	130,535
Civilian employees.....	407,731	275	77,597
Total.....	14,382,634	1,542,980	1,288,212
Cost of shipment at public expense.....			\$197,226.09
Cost of packing and crating at public expense.....			78,714.29
Total cost.....			275,940.38

PHILIPPINE ISLANDS.

	Baggage shipped at public expense.	Professional books shipped at public expense.	Baggage in excess of allowance at expense of owner.
	Pounds.	Pounds.	Pounds.
Officers.....	561,006	28,737	11,935
Noncommissioned officers.....	102,907	207	535
Civilian employees.....	8,465		
Total.....	672,378	28,934	12,460
Cost of shipment at public expense.....			\$1,804.78
Cost of packing and crating at public expense.....			11,602.80
Total cost.....			13,407.58

EXHIBIT 18.

Cost to the Quartermaster Corps of operation of military telegraph lines in Alaska, exclusive of the operation of the cable ship "Burnside."

Construction and repair of buildings.....	\$5,334.92
Rental of lodgings and quarters.....	507.25
Rental of offices.....	400.00
Subsistence.....	21,548.47
Clothing.....	3,676.91
Water, heat, and light.....	15,501.79
Telephone rentals.....	126.00
Scavenger service.....	24.00
Newspapers and periodicals.....	49.95
Forage.....	3,126.27
Shoeing animals.....	377.10
Packing and crating.....	113.13
Purchase of dogs.....	680.00
Hire of dogs.....	63.75
Hire of launches.....	3.00
Purchase of sleds.....	318.07
Stabling public animals.....	236.10
Repairs to means of transportation.....	155.25
Wharfage, drayage, and hauling.....	9,846.56
Snowshoes and snowshoe webbing, purchase of.....	190.57
Harness.....	55.14
Miscellaneous.....	3.75
Total.....	62,199.82

EXHIBIT 19.

Motor trucks purchased during the fiscal year 1916, except the Philippine Islands.

Make.	Date purchased.	Capacity.	Serial number.	Cost.	Where used.
		Tons.			
Locomobile.....	June 24, 1916	3	2276	\$3,340.00	Mexican border.
Do.....	do.....	3	2277	3,340.00	Do.
Do.....	do.....	3	2210	3,340.00	Do.
Do.....	do.....	3	2717	3,340.00	Do.
Do.....	do.....	3	2227	3,340.00	Do.
Do.....	do.....	3	2258	3,340.00	Do.
Do.....	do.....	3	2261	3,340.00	Do.
Do.....	do.....	3	2263	3,340.00	Do.
Do.....	do.....	3	1633	3,340.00	Do.
Do.....	do.....	3	2115	3,340.00	Do.
Do.....	do.....	3	2116	3,340.00	Do.
Do.....	do.....	3	2117	3,340.00	Do.
Do.....	do.....	3	2122	3,340.00	Do.
Do.....	do.....	3	2209	3,340.00	Do.
Do.....	do.....	3	2211	3,340.00	Do.
Do.....	do.....	3	2218	3,340.00	Do.
Do.....	do.....	3	2219	3,340.00	Do.
Do.....	do.....	3	2220	3,340.00	Do.
Do.....	do.....	3	2221	3,340.00	Do.
Do.....	do.....	3	2224	3,340.00	Do.
Do.....	do.....	3	2225	3,340.00	Do.
Do.....	do.....	3	2226	3,340.00	Do.
Do.....	do.....	3	2253	3,340.00	Do.
Do.....	do.....	3	2254	3,340.00	Do.
Do.....	do.....	3	2255	3,340.00	Do.
Do.....	do.....	3	2256	3,340.00	Do.
Do.....	do.....	3	2257	3,340.00	Do.
Do.....	do.....	3	2259	3,340.00	Do.
Do.....	do.....	3	2260	3,340.00	Do.
Do.....	do.....	3	2262	3,340.00	Do.
Do.....	do.....	3	2265	3,340.00	Do.
Do.....	do.....	3	2266	3,340.00	Do.
Do.....	do.....	3	2267	3,340.00	Do.
Do.....	do.....	3	2269	3,340.00	Do.
Do.....	do.....	3	2270	3,340.00	Do.
Do.....	do.....	3	2272	3,340.00	Do.
Do.....	do.....	3	2273	3,340.00	Do.
Do.....	do.....	3	2274	3,340.00	Do.
Do.....	do.....	3	2275	3,340.00	Do.
Do.....	May 13, 1916	3	1615	3,340.00	Do.
Do.....	do.....	3	1617	3,340.00	Do.
Do.....	do.....	3	1621	3,340.00	Do.
Do.....	do.....	3	1622	3,340.00	Do.
Do.....	do.....	3	1624	3,340.00	Do.
Do.....	do.....	3	1620	3,340.00	Do.

Motor trucks purchased during the fiscal year 1916, except the Philippine Islands—Contd.

Make.	Date purchased.	Capacity.	Serial number.	Cost.	Where used.
		Tons.			
Locomobile	May 13, 1916	3	1026	00	Mexican border.
Do.....	do.....	3	1027	00	Do.
Do.....	do.....	3	1028	00	Do.
Do.....	do.....	3	1029	00	Do.
Do.....	do.....	3	1031	00	Do.
Do.....	do.....	3	1036	00	Do.
Do.....	do.....	3	1037	00	Do.
Do.....	do.....	3	1038	00	Do.
Do.....	do.....	3	1039	00	Do.
Do.....	do.....	3	1041	00	Do.
Do.....	do.....	3	1042	00	Do.
Do.....	do.....	3	1043	00	Do.
Do.....	do.....	3	1044	00	Do.
Do.....	do.....	3	2082	00	Do.
Do.....	do.....	3	2090	00	Do.
Do.....	do.....	3	2123	00	Do.
Do.....	do.....	3	2194	00	Do.
Do.....	do.....	3	2195	00	Do.
Do.....	do.....	3	2197	00	Do.
Do.....	do.....	3	2201	00	Do.
Do.....	do.....	3	2202	00	Do.
Do.....	do.....	3	2203	00	Do.
Peelless	May, 1916	3	30590	00	Hawaii.
Do.....	June 8, 1916	3	A 40480	00	Mexican border.
Do.....	do.....	3	40481	00	Do.
Do.....	do.....	3	40482	00	Do.
Do.....	do.....	3	40483	00	Do.
Do.....	do.....	3	40484	00	Do.
Do.....	do.....	3	40485	00	Do.
Do.....	do.....	3	40486	00	Do.
Do.....	do.....	3	40487	00	Do.
Do.....	do.....	3	40488	00	Do.
Do.....	do.....	3	40489	00	Do.
Do.....	do.....	3	40490	00	Do.
Do.....	do.....	3	40491	00	Do.
Do.....	do.....	3	40492	00	Do.
Do.....	do.....	3	40493	00	Do.
Do.....	do.....	3	40494	00	Do.
Do.....	do.....	3	40495	00	Do.
Do.....	do.....	3	40496	00	Do.
Do.....	do.....	3	40497	00	Do.
Do.....	do.....	3	40498	00	Do.
Do.....	do.....	3	40499	00	Do.
Do.....	do.....	3	40501	00	Do.
Do.....	do.....	3	40502	00	Do.
Do.....	do.....	3	40503	00	Do.
Do.....	do.....	3	40504	00	Do.
Do.....	do.....	3	40505	00	Do.
Do.....	do.....	3	40506	00	Do.
Do.....	do.....	3	40507	00	Do.
Do.....	do.....	3	40508	00	Do.
Do.....	do.....	3	40509	00	Do.
Do.....	do.....	3	40510	00	Do.
Do.....	do.....	3	40511	00	Do.
Do.....	June 19, 1916	3	40588	00	Do.
Do.....	June 24, 1916	5	5348	00	Do.
Do.....	do.....	5	5349	00	Do.
Do.....	do.....	3	40544	00	Do.
Do.....	do.....	3	40537	00	Do.
Do.....	do.....	3	40560	00	Do.
Do.....	do.....	3	40563	00	Do.
Do.....	do.....	3	40563	00	Do.
Do.....	do.....	3	40564	00	Do.
Do.....	do.....	3	40565	00	Do.
Do.....	do.....	3	40566	00	Do.
Do.....	do.....	3	40569	00	Do.
Do.....	do.....	3	40562	00	Do.
Do.....	do.....	3	40565	00	Do.
Do.....	do.....	3	40567	00	Do.
Do.....	do.....	3	40546	00	Do.
Do.....	do.....	3	40542	00	Do.
Do.....	do.....	3	40500	00	Do.
Do.....	do.....	3	40535	00	Do.
Do.....	do.....	3	40547	00	Do.
Do.....	do.....	3	40536	00	Do.
Do.....	do.....	3	40516	00	Do.
Do.....	do.....	3	40533	00	Do.
Do.....	do.....	3	40530	00	Do.
Do.....	do.....	3	40543	00	Do.
Do.....	do.....	3	40525	00	Do.
Do.....	do.....	3	40522	00	Do.
Do.....	do.....	3	40520	00	Do.

Motor trucks purchased during the fiscal year 1916, except the Philippine Islands—Contd.

Make.	Date purchased.	Capacity.	Serial number.	Cost.	Where used.
		Tons.			
Peerless	June 24, 1916	3	40537	\$3,050.00	Mexican border.
Do.	do.	3	40528	3,050.00	Do.
Do.	do.	3	40512	3,050.00	Do.
Do.	do.	3	40524	3,050.00	Do.
Do.	do.	3	40545	3,050.00	Do.
Do.	do.	3	40521	3,050.00	Do.
Do.	do.	3	40522	3,050.00	Do.
Do.	do.	3	40526	3,050.00	Do.
Do.	do.	3	40534	3,050.00	Do.
Do.	do.	3	40486	3,050.00	Do.
Do.	do.	3	40482	3,050.00	Do.
Do.	do.	3	40544	3,050.00	Do.
Do.	do.	3	40531	3,050.00	Do.
Do.	do.	3	40527	3,050.00	Do.
Do.	do.	3	40523	3,050.00	Do.
Do.	do.	3	40536	3,050.00	Do.
Do.	do.	3	40541	3,050.00	Do.
Do.	do.	3	40538	3,050.00	Do.
Do.	do.	3	40540	3,050.00	Do.
Jeffery	Dec. 20, 1915	2	54644	2,500.00	Panama.
Do.	do.	2	54646	2,500.00	Do.
Do.	Dec. 31, 1915	2	54641	2,500.00	Do.
Do.	Aug. 16, 1915	2	54141	2,500.00	Aero Squadron.
Do.	do.	2	54135	2,500.00	Do.
Do.	Nov. 1, 1915	2	54620	2,500.00	Fort Williams, Me.
Do.	Mar. 20, 1916	2	70942	2,778.00	Mexican border.
Do.	do.	2	70958	2,778.00	Do.
Do.	do.	2	70959	2,778.00	Do.
Do.	do.	2	70961	2,778.00	Do.
Do.	do.	2	70962	2,778.00	Do.
Do.	do.	2	70963	2,778.00	Do.
Do.	do.	2	70964	2,778.00	Do.
Do.	do.	2	70968	2,778.00	Do.
Do.	do.	2	70969	2,778.00	Do.
Do.	do.	2	70970	2,778.00	Do.
Do.	do.	2	70992	2,778.00	Do.
Do.	do.	2	72150	2,778.00	Do.
Do.	do.	2	72151	2,778.00	Do.
Do.	do.	2	72152	2,778.00	Do.
Do.	do.	2	72153	2,778.00	Do.
Do.	do.	2	72154	2,778.00	Do.
Do.	do.	2	72155	2,778.00	Do.
Do.	do.	2	72156	2,778.00	Do.
Do.	do.	2	72157	2,778.00	Do.
Do.	do.	2	72158	2,778.00	Do.
Do.	do.	2	72159	2,778.00	Do.
Do.	do.	2	72161	2,778.00	Do.
Do.	do.	2	72162	2,778.00	Do.
Do.	do.	2	72163	2,778.00	Do.
Do.	do.	2	72165	2,778.00	Do.
Do.	do.	2	72166	2,778.00	Do.
Do.	do.	2	72167	2,778.00	Do.
Do.	do.	2	70947	2,778.00	Do.
Do.	do.	2	70953	2,778.00	Do.
Do.	do.	2	70956	2,778.00	Do.
Do.	do.	2	70960	2,778.00	Do.
Do.	do.	2	70966	2,778.00	Do.
Do.	do.	2	70967	2,778.00	Do.
Do.	do.	2	70972	2,778.00	Do.
Do.	do.	2	70973	2,778.00	Do.
Do.	do.	2	70975	2,778.00	Do.
Do.	do.	2	70976	2,778.00	Do.
Do.	do.	2	70977	2,778.00	Do.
Do.	do.	2	70981	2,778.00	Do.
Do.	do.	2	70982	2,778.00	Do.
Do.	do.	2	70983	2,778.00	Do.
Do.	do.	2	70984	2,778.00	Do.
Do.	do.	2	70987	2,778.00	Do.
Do.	do.	2	70989	2,778.00	Do.
Do.	do.	2	70990	2,778.00	Do.
Do.	do.	2	70991	2,778.00	Do.
Do.	do.	2	72144	2,778.00	Do.
Do.	do.	2	72164	2,778.00	Do.
Do.	do.	2	72168	2,778.00	Do.
Do.	do.	2	72169	2,778.00	Do.
Do.	do.	2	70985	2,778.00	Do.
Do.	do.	2	70986	2,778.00	Do.
Do.	do.	2	70939	2,778.00	Do.
Do.	Mar. 14, 1916	2	70916	2,628.00	Do.
Do.	do.	2	70919	2,628.00	Do.
Do.	do.	2	70852	2,628.00	Do.
Do.	do.	2	70872	2,628.00	Do.

Motor trucks purchased during the fiscal year 1916, except the Philippine Islands—Contd.

Jeffery.....	Mar. 14, 1915	2	70878	00	Mexican border.
Do.....	do.....	2	70880	00	Do.
Do.....	do.....	2	70886	00	Do.
Do.....	do.....	2	70888	00	Do.
Do.....	do.....	2	70890	00	Do.
Do.....	do.....	2	70893	00	Do.
Do.....	do.....	2	70895	00	Do.
Do.....	do.....	2	70899	00	Do.
Do.....	do.....	2	70904	00	Do.
Do.....	do.....	2	70906	00	Do.
Do.....	do.....	2	70907	00	Do.
Do.....	do.....	2	70908	00	Do.
Do.....	do.....	2	70912	00	Do.
Do.....	do.....	2	70914	00	Do.
Do.....	do.....	2	70918	00	Do.
Do.....	do.....	2	70921	00	Do.
Do.....	do.....	2	70923	00	Do.
Do.....	do.....	2	70926	00	Do.
Do.....	do.....	2	70927	00	Do.
Do.....	do.....	2	70929	00	Do.
Do.....	do.....	2	70931	00	Do.
Do.....	do.....	2	70932	00	Do.
Do.....	do.....	2	70934	00	Do.
Do.....	do.....	2	70858	00	Do.
Do.....	do.....	2	70875	00	Do.
Do.....	do.....	2	70879	00	Do.
Do.....	do.....	2	70884	00	Do.
Do.....	do.....	2	70892	00	Do.
Do.....	do.....	2	70896	00	Do.
Do.....	do.....	2	70897	00	Do.
Do.....	do.....	2	70898	00	Do.
Do.....	do.....	2	70900	00	Do.
Do.....	do.....	2	70901	00	Do.
Do.....	do.....	2	70902	00	Do.
Do.....	do.....	2	70903	00	Do.
Do.....	do.....	2	70906	00	Do.
Do.....	do.....	2	70909	00	Do.
Do.....	do.....	2	70910	00	Do.
Do.....	do.....	2	70911	00	Do.
Do.....	do.....	2	70913	00	Do.
Do.....	do.....	2	70915	00	Do.
Do.....	do.....	2	70917	00	Do.
Do.....	do.....	2	70922	00	Do.
Do.....	do.....	2	70924	00	Do.
Do.....	do.....	2	70925	00	Do.
Do.....	do.....	2	70928	00	Do.
Do.....	do.....	2	70930	00	Do.
Do.....	do.....	2	70936	00	Do.
Do.....	do.....	2	70938	00	Do.
Do.....	Apr. 5, 1915	2	70933	80	Do.
Do.....	do.....	2	70974	80	Do.
Do.....	do.....	2	70980	80	Do.
Do.....	do.....	2	70988	80	Do.
Do.....	do.....	2	71002	80	Do.
Do.....	do.....	2	71003	80	Do.
Do.....	do.....	2	71007	80	Do.
Do.....	do.....	2	71011	80	Do.
Do.....	do.....	2	71013	80	Do.
Do.....	do.....	2	71016	80	Do.
Do.....	do.....	2	71021	80	Do.
Do.....	do.....	2	71025	80	Do.
Do.....	do.....	2	71027	80	Do.
Do.....	do.....	2	71028	80	Do.
Do.....	do.....	2	71031	80	Do.
Do.....	do.....	2	71036	80	Do.
Do.....	do.....	2	71037	80	Do.
Do.....	do.....	2	71038	80	Do.
Do.....	do.....	2	71040	80	Do.
Do.....	do.....	2	71041	80	Do.
Do.....	do.....	2	71042	80	Do.
Do.....	do.....	2	71043	80	Do.
Do.....	do.....	2	71045	80	Do.
Do.....	do.....	2	71047	80	Do.
Do.....	do.....	2	71048	80	Do.
Do.....	do.....	2	71049	80	Do.
Do.....	do.....	2	71070	80	Do.
White.....	Nov. 1, 1915	11	4562	00	Do.
Do.....	do.....	11	4559	00	Do.
Do.....	do.....	11	4560	00	Do.
Do.....	do.....	11	4561	00	Do.
Do.....	do.....	11	4562	00	Do.

Motor trucks purchased during the fiscal year 1916, except the Philippine Islands—Contd.

Make.	Date purchased.	Capacity.	Serial number.	Cost.	Where used.
		Tons.			
White.....	May 16, 1916	1 1/2	31117	\$2,600.00	Mexican border.
Do.....	do.....	1 1/2	31127	2,600.00	Do.
Do.....	do.....	1 1/2	31130	2,600.00	Do.
Do.....	do.....	1 1/2	31137	2,600.00	Do.
Do.....	do.....	1 1/2	31826	2,600.00	Do.
Do.....	do.....	1 1/2	31829	2,600.00	Do.
Do.....	do.....	1 1/2	31830	2,600.00	Do.
Do.....	do.....	1 1/2	31038	2,600.00	Do.
Do.....	Mar. 14, 1916	1 1/2	31073	2,430.00	Do.
Do.....	do.....	1 1/2	31069	2,430.00	Do.
Do.....	do.....	1 1/2	31089	2,430.00	Do.
Do.....	do.....	1 1/2	31086	2,430.00	Do.
Do.....	do.....	1 1/2	31096	2,430.00	Do.
Do.....	do.....	1 1/2	31057	2,430.00	Do.
Do.....	do.....	1 1/2	31075	2,430.00	Do.
Do.....	do.....	1 1/2	31045	2,430.00	Do.
Do.....	do.....	1 1/2	31081	2,430.00	Do.
Do.....	do.....	1 1/2	31088	2,430.00	Do.
Do.....	do.....	1 1/2	31091	2,430.00	Do.
Do.....	do.....	1 1/2	31062	2,430.00	Do.
Do.....	do.....	1 1/2	31101	2,430.00	Do.
Do.....	do.....	1 1/2	31053	2,430.00	Do.
Do.....	do.....	1 1/2	31042	2,430.00	Do.
Do.....	do.....	1 1/2	31074	2,430.00	Do.
Do.....	do.....	1 1/2	31026	2,430.00	Do.
Do.....	do.....	1 1/2	31035	2,430.00	Do.
Do.....	do.....	1 1/2	31032	2,430.00	Do.
Do.....	do.....	1 1/2	31063	2,430.00	Do.
Do.....	do.....	1 1/2	31064	2,430.00	Do.
Do.....	do.....	1 1/2	31037	2,430.00	Do.
Do.....	do.....	1 1/2	31039	2,430.00	Do.
Do.....	do.....	1 1/2	31098	2,430.00	Do.
Do.....	do.....	1 1/2	31070	2,430.00	Do.
Do.....	do.....	1 1/2	31059	2,430.00	Do.
Do.....	do.....	1 1/2	31076	2,430.00	Do.
Do.....	Apr. 5, 1916	1 1/2	31065	2,746.48	Do.
Do.....	do.....	1 1/2	31080	2,746.48	Do.
Do.....	do.....	1 1/2	31024	2,746.48	Do.
Do.....	do.....	1 1/2	31052	2,746.48	Do.
Do.....	do.....	1 1/2	31043	2,746.48	Do.
Do.....	do.....	1 1/2	31084	2,746.48	Do.
Do.....	do.....	1 1/2	31049	2,746.48	Do.
Do.....	do.....	1 1/2	31058	2,746.48	Do.
Do.....	do.....	1 1/2	31118	2,746.48	Do.
Do.....	do.....	1 1/2	31832	2,746.48	Do.
Do.....	do.....	1 1/2	31056	2,746.48	Do.
Do.....	do.....	1 1/2	31033	2,746.48	Do.
Do.....	do.....	1 1/2	31068	2,746.48	Do.
Do.....	do.....	1 1/2	31034	2,746.48	Do.
Do.....	do.....	1 1/2	31065	2,746.48	Do.
Do.....	do.....	1 1/2	31055	2,746.48	Do.
Do.....	do.....	1 1/2	31121	2,746.48	Do.
Do.....	do.....	1 1/2	31841	2,746.48	Do.
Do.....	do.....	1 1/2	31027	2,746.48	Do.
Do.....	do.....	1 1/2	31029	2,746.48	Do.
Do.....	do.....	1 1/2	31108	2,746.48	Do.
Do.....	do.....	1 1/2	31079	2,746.48	Do.
Do.....	do.....	1 1/2	31023	2,746.48	Do.
Do.....	do.....	1 1/2	31066	2,746.48	Do.
Do.....	do.....	1 1/2	31067	2,746.48	Do.
Do.....	do.....	1 1/2	31028	2,746.48	Do.
Do.....	do.....	1 1/2	31077	2,746.48	Do.
Do.....	do.....	1 1/2	31129	2,746.48	Do.
Do.....	do.....	1 1/2	31109	2,746.48	Do.
Do.....	do.....	1 1/2	31123	2,746.48	Do.
Do.....	do.....	1 1/2	31128	2,746.48	Do.
Do.....	do.....	1 1/2	31119	2,746.48	Do.
Do.....	do.....	1 1/2	31124	2,746.48	Do.
Do.....	do.....	1 1/2	31092	2,746.48	Do.
Do.....	do.....	1 1/2	31120	2,746.48	Do.
Do.....	do.....	1 1/2	31842	2,746.48	Do.
Do.....	do.....	1 1/2	31839	2,746.48	Do.
Do.....	do.....	1 1/2	31054	2,746.48	Do.
Do.....	do.....	1 1/2	31132	2,746.48	Do.
Do.....	do.....	1 1/2	31122	2,746.48	Do.
Do.....	do.....	1 1/2	31843	2,746.48	Do.
Do.....	do.....	1 1/2	31099	2,746.48	Do.
Do.....	do.....	1 1/2	31834	2,746.48	Do.
Do.....	do.....	1 1/2	31112	2,746.48	Do.
Do.....	do.....	1 1/2	31102	2,746.48	Do.
Do.....	do.....	1 1/2	31827	2,746.48	Do.

Motor trucks purchased during the fiscal year 1916, except the Philippine Islands—Contd.

Make.	Date purchased.	Capacity.	Serial number.	Cost.	Where used.
		Tons.			
White.....	Apr. 5, 1916	1 1/2	31106	\$2,746.48	Mexican border.
Do.....	do.....	1 1/2	31836	2,746.48	Do.
Do.....	do.....	1 1/2	31095	2,746.48	Do.
Do.....	do.....	1 1/2	31111	2,746.48	Do.
Do.....	do.....	1 1/2	31103	2,746.48	Do.
Do.....	do.....	1 1/2	31840	2,746.48	Do.
Do.....	do.....	1 1/2	31133	2,746.48	Do.
Do.....	do.....	1 1/2	31838	2,746.48	Do.
Packard.....	June 30, 1916	3	91828	3,155.00	Philadelphia depot.
Do.....	do.....	3	92055	3,155.00	Do.
Do.....	May 12, 1916	3	91452	3,250.00	Mexican border.
Do.....	do.....	3	91465	3,250.00	Do.
Do.....	do.....	3	91805	3,250.00	Do.
Do.....	do.....	3	91816	3,250.00	Do.
Do.....	do.....	3	91847	3,250.00	Do.
Do.....	do.....	3	91852	3,250.00	Do.
Do.....	do.....	3	91898	3,250.00	Do.
Do.....	do.....	3	91900	3,250.00	Do.
Do.....	do.....	3	91902	3,250.00	Do.
Do.....	do.....	3	91904	3,250.00	Do.
Do.....	do.....	3	91905	3,250.00	Do.
Do.....	do.....	3	91909	3,250.00	Do.
Do.....	do.....	3	91914	3,250.00	Do.
Do.....	do.....	3	91924	3,250.00	Do.
Do.....	do.....	3	91928	3,250.00	Do.
Do.....	do.....	3	91933	3,250.00	Do.
Do.....	do.....	3	92014	3,250.00	Do.
Do.....	do.....	3	92153	3,250.00	Do.
Do.....	do.....	3	92194	3,250.00	Do.
Do.....	do.....	3	92201	3,250.00	Do.
Do.....	do.....	3	92204	3,250.00	Do.
Do.....	do.....	3	92206	3,250.00	Do.
Do.....	do.....	3	92217	3,250.00	Do.
Do.....	do.....	3	92220	3,250.00	Do.
Do.....	do.....	3	92228	3,250.00	Do.
Do.....	do.....	3	92244	3,250.00	Do.
Do.....	do.....	3	92249	3,250.00	Do.
Do.....	do.....	3	92270	3,250.00	Do.
Do.....	do.....	3	91923	3,250.00	Do.
Do.....	do.....	3	91835	3,250.00	Do.
Do.....	do.....	3	92094	3,250.00	Do.
Do.....	do.....	3	92259	3,250.00	Do.
Do.....	do.....	3	91915	3,250.00	Do.
Do.....	do.....	3	92295	3,250.00	Do.
Do.....	do.....	3	91910	3,250.00	Do.
Do.....	do.....	3	92273	3,250.00	Do.
Do.....	do.....	3	92254	3,250.00	Do.
Do.....	do.....	3	91941	3,250.00	Do.
Do.....	do.....	3	92269	3,250.00	Do.
Do.....	do.....	3	92138	3,250.00	Do.
Do.....	do.....	3	91861	3,250.00	Do.
Do.....	do.....	3	92252	3,250.00	Do.
Do.....	do.....	3	91815	3,250.00	Do.
Do.....	do.....	3	92274	3,250.00	Do.
Do.....	do.....	3	91927	3,250.00	Do.
Do.....	do.....	3	91922	3,250.00	Do.
Do.....	do.....	3	92263	3,250.00	Do.
Do.....	do.....	3	91952	3,250.00	Do.
Do.....	do.....	3	91955	3,250.00	Do.
Do.....	do.....	3	92271	3,250.00	Do.
Do.....	do.....	3	92243	3,250.00	Do.
Do.....	do.....	3	92219	3,250.00	Do.
Do.....	do.....	3	92256	3,250.00	Do.
Do.....	do.....	3	92203	3,250.00	Do.
Do.....	do.....	3	92017	3,250.00	Do.
Do.....	do.....	3	91865	3,250.00	Do.
Do.....	Apr. 5, 1916	1 1/2	74119	3,040.74	Do.
Do.....	do.....	1 1/2	74130	3,040.74	Do.
Do.....	do.....	1 1/2	74146	3,040.74	Do.
Do.....	do.....	1 1/2	74122	3,040.74	Do.
Do.....	do.....	1 1/2	73952	3,040.74	Do.
Do.....	do.....	1 1/2	74127	3,040.74	Do.
Do.....	do.....	1 1/2	74098	3,040.74	Do.
Do.....	do.....	1 1/2	74134	3,040.74	Do.
Do.....	do.....	1 1/2	74113	3,040.74	Do.
Do.....	do.....	1 1/2	74117	3,040.74	Do.
Do.....	do.....	1 1/2	74111	3,040.74	Do.
Do.....	do.....	1 1/2	74124	3,040.74	Do.
Do.....	do.....	1 1/2	74145	3,040.74	Do.
Do.....	do.....	1 1/2	74123	3,040.74	Do.
Do.....	do.....	1 1/2	74109	3,040.74	Do.

EXHIBIT 18.

Cost to the Quartermaster Corps of operation of military telegraph lines in Alaska, exclusive of the operation of the cable ship "Burnside."

Construction and repair of buildings.....	\$5,334.92
Rental of lodgings and quarters.....	507.25
Rental of offices.....	400.00
Subsistence.....	21,548.47
Clothing.....	3,676.91
Water, heat, and light.....	15,501.70
Telephone rentals.....	126.00
Scavenger service.....	24.00
Newspapers and periodicals.....	49.95
Forage.....	3,126.27
Shoeing animals.....	377.10
Packing and crating.....	113.13
Purchase of dogs.....	680.00
Hire of dogs.....	63.75
Hire of launches.....	3.00
Purchase of sleds.....	318.07
Stabling public animals.....	236.10
Repairs to means of transportation.....	155.25
Wharfage, drayage, and hauling.....	9,846.56
Snowshoes and snowshoe webbing, purchase of.....	190.57
Harness.....	55.14
Miscellaneous.....	3.75
Total.....	62,199.82

EXHIBIT 19.

Motor trucks purchased during the fiscal year 1916, except the Philippine Islands.

Make.	Date purchased.	Capacity.	Serial number.	Cost.	Where used.
		Tons.			
Locomobile.....	June 24, 1916	3	2276	\$3,340.00	Mexican border.
Do.....	do	3	2277	3,340.00	Do.
Do.....	do	3	2210	3,340.00	Do.
Do.....	do	3	2717	3,340.00	Do.
Do.....	do	3	2227	3,340.00	Do.
Do.....	do	3	2258	3,340.00	Do.
Do.....	do	3	2261	3,340.00	Do.
Do.....	do	3	2263	3,340.00	Do.
Do.....	do	3	1633	3,340.00	Do.
Do.....	do	3	2115	3,340.00	Do.
Do.....	do	3	2116	3,340.00	Do.
Do.....	do	3	2117	3,340.00	Do.
Do.....	do	3	2122	3,340.00	Do.
Do.....	do	3	2209	3,340.00	Do.
Do.....	do	3	2211	3,340.00	Do.
Do.....	do	3	2218	3,340.00	Do.
Do.....	do	3	2219	3,340.00	Do.
Do.....	do	3	2220	3,340.00	Do.
Do.....	do	3	2221	3,340.00	Do.
Do.....	do	3	2224	3,340.00	Do.
Do.....	do	3	2225	3,340.00	Do.
Do.....	do	3	2226	3,340.00	Do.
Do.....	do	3	2253	3,340.00	Do.
Do.....	do	3	2254	3,340.00	Do.
Do.....	do	3	2255	3,340.00	Do.
Do.....	do	3	2256	3,340.00	Do.
Do.....	do	3	2257	3,340.00	Do.
Do.....	do	3	2259	3,340.00	Do.
Do.....	do	3	2260	3,340.00	Do.
Do.....	do	3	2262	3,340.00	Do.
Do.....	do	3	2265	3,340.00	Do.
Do.....	do	3	2266	3,340.00	Do.
Do.....	do	3	2267	3,340.00	Do.
Do.....	do	3	2269	3,340.00	Do.
Do.....	do	3	2270	3,340.00	Do.
Do.....	do	3	2272	3,340.00	Do.
Do.....	do	3	2273	3,340.00	Do.
Do.....	do	3	2274	3,340.00	Do.
Do.....	do	3	2275	3,340.00	Do.
Do.....	May 13, 1916	3	1615	3,340.00	Do.
Do.....	do	3	1617	3,340.00	Do.
Do.....	do	3	1621	3,340.00	Do.
Do.....	do	3	1622	3,340.00	Do.
Do.....	do	3	1624	3,340.00	Do.
Do.....	do	3	1620	3,340.00	Do.

Motor trucks purchased during the fiscal year 1916, except the Philippine Islands—Contd.

Make.	Date purchased.	Capacity.	Serial number.	Cost.	Where used.
		Tons.			
Clintonville Four-Wheel Drive.	June 8, 1916	3	902	\$3,200.00	Mexican border.
Do.	do.	3	903	3,200.00	Do.
Do.	do.	3	906	3,200.00	Do.
Do.	do.	3	909	3,200.00	Do.
Do.	do.	3	910	3,200.00	Do.
Do.	do.	3	911	3,200.00	Do.
Do.	do.	3	912	3,200.00	Do.
Do.	do.	3	913	3,200.00	Do.
Do.	do.	3	914	3,200.00	Do.
Do.	do.	3	915	3,200.00	Do.
Do.	do.	3	916	3,200.00	Do.
Do.	do.	3	917	3,200.00	Do.
Do.	do.	3	918	3,200.00	Do.
Do.	do.	3	919	3,200.00	Do.
Do.	do.	3	920	3,200.00	Do.
Do.	do.	3	921	3,200.00	Do.
Do.	do.	3	926	3,200.00	Do.
Do.	do.	3	967	3,200.00	Do.
Do.	June 8, 1916	3		3,400.00	Do.
Ford	June 16, 1916	(3)		450.00	Fort Barrancas, Fla.
Do.	Jan. 19, 1916	(3)	1032012	496.80	Eastern Department.
Do.	do.	(3)	1029933	496.80	Do.
Do.	do.	(3)	1015922	496.80	Do.
Do.	do.	(3)	1029870	496.80	Do.
Do.	do.	(3)	1038116	496.80	Do.
Do.	do.	(3)	1029933	496.80	Do.
Do.	Nov. 18, 1915	(3)	925820	501.65	Fort Hamilton, N. Y.
Do.	do.	(3)	953572	501.65	Panama.
Do.	Apr. —, 1916	(3)	1088194	508.55	Mexican border.
Do.	do.	(3)	1050021	508.55	Do.
Denby	Apr. 24, 1916	1 1/2	1011	500.00	Do.
Garford	Mar. —, 1916	1 1/2	66661	1,634.26	Do.
Federal	May 15, 1916	1 1/2	10165	1,800.00	Do.
Reo	Apr. 11, 1916	1 1/2	11248	860.00	Do.
Do.	do.	1 1/2	11246	860.00	Do.
Do.	do.	1 1/2	11247	860.00	Do.
Do.	May 10, 1916	1 1/2	11548	860.00	Do.
Republic	May 16, 1916	1 1/2	A617	1,875.00	Do.
Do.	do.	1 1/2	A618	1,875.00	Do.
G. M. C.	May 29, 1916	3	41329	2,375.00	Do.
Do.	May 12, 1916	1 1/2	31319	2,000.00	Do.
Electric	June 27, 1916	1		1,575.00	Philadelphia depot.
Do.	do.	1		1,575.00	Do.
Kelly-Springfield	Nov. 1, 1915	1 1/2	4017	1,850.00	Fort Bayard, N. Mex.
Do.	do.	3	5977	2,800.00	Fort Worden, Wash.
Do.	Apr. 11, 1916	1 1/2	4131	2,165.00	Mexican border.
Do.	do.	1 1/2	4115	2,165.00	Do.
Do.	do.	1 1/2	4136	2,165.00	Do.
Do.	do.	1 1/2	4116	2,165.00	Do.
Do.	Mar. 10, 1916	1 1/2	4110	1,895.00	Do.
Do.	do.	1 1/2	4132	1,895.00	Do.
Do.	do.	1 1/2	4133	1,895.00	Do.
Do.	do.	1 1/2	4140	1,895.00	Do.
Total, 585.				1,665,985.81	

1 Delivery.

MOTOR TANK TRUCKS.

3	5358	\$3,350.00	Mexican border.
3	5299	3,350.00	Do.
3	755B	3,400.00	Do.
3	774B	3,400.00	Do.
3	776B	3,400.00	Do.
3	775B	3,400.00	Do.
3	773B	3,400.00	Do.
3	772B	3,400.00	Do.
3	780B	3,400.00	Do.
3	777B	3,400.00	Do.
3	778B	3,400.00	Do.
3	780B	3,400.00	Do.
3	756B	3,400.00	Do.
3	757B	3,400.00	Do.
3	758B	3,400.00	Do.
3	759B	3,400.00	Do.
3	751B	3,200.00	Do.
3	808B	3,500.00	Do.

Motor trucks purchased during the fiscal year 1916, except the Philippine Islands—Contd.

MOTOR TANK TRUCKS—Continued.

Make.	Date purchased.	Capacity.	Serial number.	Cost.	Where used.
		<i>Tons.</i>			
Clintonville Four-Wheel Drive.	June 8, 1916	3	904B	\$3,500.00	Mexican border.
Do.....	do.....	3	905B	3,500.00	Do.
Do.....	do.....	3	907B	3,500.00	Do.
Do.....	do.....	3	908B	3,500.00	Do.
Packard.....	Apr. 8, 1916	3	90711	3,825.00	Do.
Do.....	do.....	3	90664	3,825.00	Do.
Do.....	do.....	3	90667	3,825.00	Do.
Do.....	do.....	3	90634	3,825.00	Do.
Peerless.....	May 19, 1916	3	40466	3,450.00	Do.
Do.....	do.....	3	40467	3,450.00	Do.
Do.....	do.....	3	40468	3,450.00	Do.
Do.....	do.....	3	40469	3,450.00	Do.
Do.....	do.....	3	40470	3,450.00	Do.
Do.....	do.....	3	40471	3,450.00	Do.
Do.....	do.....	3	40472	3,450.00	Do.
Do.....	do.....	3	40473	3,450.00	Do.
Do.....	do.....	3	40474	3,450.00	Do.
Do.....	do.....	3	40475	3,450.00	Do.
Do.....	June 8, 1916	3	4730	3,450.00	Do.
Do.....	do.....	3	4727	3,450.00	Do.
Do.....	do.....	3	4729	3,450.00	Do.
Do.....	do.....	3	4726	3,450.00	Do.
Do.....	do.....	3	4728	3,450.00	Do.
White.....	Mar. 20, 1916	1½	31135	2,550.00	Do.
Do.....	do.....	1½	30544	2,550.00	Do.
Do.....	do.....	1½	31781	2,550.00	Do.
Do.....	Mar. 30, 1916	1½	32179	2,850.00	Do.
Do.....	do.....	1½	32778	2,850.00	Do.
Do.....	do.....	1½	32777	2,850.00	Do.
Do.....	do.....	1½	32178	2,850.00	Do.
Do.....	May 19, 1916	3	32741	3,500.00	Do.
Do.....	do.....	3	32671	3,500.00	Do.
Do.....	do.....	3	32726	3,500.00	Do.
Do.....	do.....	3	32727	3,500.00	Do.
Do.....	do.....	3	32740	3,500.00	Do.
Do.....	do.....	3	32743	3,500.00	Do.
Do.....	do.....	3	32730	3,500.00	Do.
Do.....	do.....	3	32722	3,500.00	Do.
Do.....	do.....	3	32541	3,500.00	Do.
Do.....	do.....	3	32540	3,500.00	Do.
Total, 57.....				196,100.00	

MOTOR MACHINE-SHOP TRUCKS.

Clintonville Four-Wheel Drive.	May 11, 1916	3	799	\$6,457.00	Mexican border.
Do.....	do.....	3		6,457.00	Do.
Jeffery.....	May 6, 1916	2	71182	2,737.80	Do.
Do.....	do.....	2	71178	2,737.80	Do.
Do.....	do.....	2	71174	2,737.80	Do.
Do.....	do.....	2	71180	2,737.80	Do.
Do.....	do.....	2	71169	2,737.80	Do.
Packard.....	do.....	3	30-3114	3,060.00	Do.
Do.....	do.....	3	30-3115	3,060.00	Do.
White.....	do.....	3	38044	2,960.00	Do.
Do.....	do.....	3	38066	2,960.00	Do.
Do.....	do.....	3	38076	2,960.00	Do.
Machine-shop equipment for above.				33,000.78	
Total, 12.....				74,603.78	

NOTE.—Two of the above chassis not equipped with machinery.

MOTOR WRECKING TRUCKS (REPAIR).

		<i>Tons.</i>			
Jeffery.....	Mar. 4, 1916	2	71070	\$3,528.00	Mexican border.
Do.....	Mar. 20, 1916	2	72196	3,528.00	Do.
Packard.....	do.....	1½	74029	6,641.06	Do.
Do.....	Apr. 5, 1916	1½	74253	6,641.06	Do.
White.....	Mar. 14, 1916	1½	31107	2,550.00	Do.
Do.....	Apr. 5, 1916	1½	31837	2,550.00	Do.
Total, 6.....				25,438.12	

Motor trucks purchased during the fiscal year for the Philippine Islands.

Make.	Date purchased.	Capacity, tons.	Number purchased.	Unit price.	Total cost.
White.....	May, 1916	1½	3	\$2,838.00	\$8,514.00
Hewitt-Ludlow.....	June, 1916	2	6	2,000.00	12,000.00
Total, 9.....					20,514.00

EXHIBIT 20.

Automobiles in use June 30, 1916, except the Philippine Islands.

Machine.	Station.	By whom used.	Annual cost.	Mileage.	Cost per mile.
Ford, 1915.....	Brownsville, Tex.....	Fourth Infantry.....	\$250.44	5,855	\$0.0427
Do.....	do.....	Commanding officer...	300.92	6,959	.043
Paige, 1913.....	Chicago, Ill.....	Recruiting officer.....	673.15	13,357	.05
Ford, 1915.....	Douglas, Ariz.....	Commanding general..	98.86	2,986	.033
Cadillac, 1915.....	Governors Island, N. Y.....	do.....	1,380.18	12,470	.11
Cadillac, 1911.....	do.....	Department head-quarters.	802.00	7,158	.112
Ford, 1915.....	El Paso, Tex.....	Officers and troops...	353.10	4,858	.04
Ford, 1914.....	do.....	do.....	467.95	10,894	.043
White, 1912.....	Front Royal, Va.....	Depot quartermaster..	1,402.16	11,947	.117
Ford, 1915.....	Hachita, N. Mex.....	Commanding officer...	384.01	6,257	.061
Do.....	Harlingen, Tex.....	do.....	486.59	10,709	.045
Do.....	do.....	Officers and troops...	295.02	8,515	.034
Cadillac, 1914.....	Hawaii.....	Commanding general..	1,414.27	8,650	.16
Ford, 1913.....	do.....	Attending surgeon....	286.23	8,060	.035
Rambler, 1912.....	do.....	Department commander.	1,124.67	10,724	.15
Ford, 1913.....	do.....	Coast-defense commander, Oahu.	669.71	8,338	.08
Rambler, 1912.....	do.....	Department quartermaster.	1,085.26	6,452	.17
White, 1911.....	do.....	Emergency purposes..	242.21	1,550	.156
Ford, 1915.....	Marfa, Tex.....	Officers and troops....	540.53	6,982	.077
Do.....	Fort McIntosh, Tex...	Signal Corps.....	277.44	6,181	.045
Ford, 1916.....	Fort Miley, Cal.....	Commanding general, coast defense.	212.27	4,427	.048
Ford, 1915.....	Mission, Tex.....	Twenty-eighth Infantry.	365.16	9,494	.038
Briarcliff, 1910.....	New York, N. Y.....	Recruiting officer.....	926.11	3,802	.243
Ford, 1915.....	Nogales, Ariz.....	Commanding officer...	319.37	6,248	.051
Railroad motor car.....	Panama.....	Commanding general..	416.25	2,202	.19
Ford, 1915.....	do.....	do.....	309.91	5,035	.061
Do.....	Presidio of San Francisco, Cal.	Quartermaster.....	313.67	8,273	.038
Cadillac, 1915.....	Fort Sam Houston, Tex.	Commanding general..	786.76	6,333	.124
Ford, 1915.....	do.....	Attending surgeon....	94.84	2,424	.039
Mitchell, 1912.....	do.....	Department quartermaster.	1,217.15	12,068	.101
White, 1913.....	do.....	Department head-quarters.	851.55	6,106	.14
Ford, 1915.....	San Francisco, Cal....	Depot quartermaster..	1,536.75	4,173	.37
Ford, 1916.....	do.....	Constructing quartermaster.	225.77	3,572	.063
Studebaker, 1911.....	do.....	Commanding general..	1,758.52	7,467	.23
Franklin, 1907 ¹	do.....	Constructing quartermaster.	1,129.63	7,012	.16
Cadillac, 1915.....	Washington, D. C.....	Chief of Staff.....	1,422.90	16,578	.08
Jeffery, 1915.....	do.....	Assistant attending surgeon.	174.21	6,732	.02
Ford, 1913.....	do.....	do.....	253.69	8,447	.03
Do.....	do.....	do.....	157.22	6,922	.022
Franklin, 1913.....	do.....	Attending surgeon....	460.39	11,551	.04
Hudson, 1911.....	do.....	Emergency purposes..	70.58	4,559	.015
Packard, 1913.....	do.....	Secretary of War.....	1,742.52	12,174	.143
Stoddard-Dayton, 1909	do.....	Emergency purposes..	87.22	3,919	.022
White, 1911.....	do.....	Depot quartermaster..	431.63	7,495	.057
Ford, 1916.....	West Point, N. Y.....	Attending surgeon....	236.97	2,438	.097
White, 1911 (bus).....	do.....	Quartermaster Corps..	803.77	6,157	.13
White, 1913.....	do.....	Superintendent Military Academy.	1,182.00	6,808	.173
Oakland, 1916.....	Fort Sam Houston, Tex.	Officers.....	12.25	134	.091

¹ Condemned and sold during the year.

Automobiles in use June 30, 1916, except the Philippine Islands—Continued.

Machine.	Station.	By whom used.	Annual cost.	Mileage.	Cost per mile.
Chevrolet, 1916.....	El Paso, Tex.....	Officers.....	\$237.46	5,152	\$0.046
Dodge, 1916.....	Fort Sam Houston, Tex.	do.....	30.65	401	.076
Do.....	do.....	do.....	13.30	98	.136
Do.....	do.....	do.....	12.60	159	.079
Do.....	do.....	do.....	3.83	34	.112
Do.....	do.....	do.....	14.69	114	.129
Do.....	do.....	do.....	31.22	512	.06
Do.....	do.....	do.....	35.80	639	.056
Do.....	do.....	do.....	87.37	1,000	.087
Do.....	El Paso, Tex.....	do.....	355.10	3,100	.114
Do.....	do.....	do.....	140.73	4,456	.031
Do.....	Fort McIntosh, Tex.....	do.....	92.04	2,142	.043
Do.....	Marathon, Tex.....	Commanding officer.....	289.63	3,749	.077
Do.....	Mission, Tex.....	Officers.....	5.93	234	.026
Do.....	Eagle Pass, Tex.....	do.....	177.90	2,009	.088
Do.....	Del Rio, Tex.....	do.....	177.74	980	.181
Do.....	Harlingen, Tex.....	do.....	209.33	1,965	.106
Do.....	Laredo, Tex.....	do.....	116.79	1,020	.114
Do.....	Harlingen, Tex.....	do.....	44.45	1,537	.029
Do.....	Marfa, Tex.....	do.....	285.70	1,206	.237
-Ford, 1916.....	Fort Bliss, Tex.....	Remount depot.....	40.58	2,952	.014
Do.....	Fort Ringgold, Tex.....	Commanding officer.....	41.05	1,050	.04
Do.....	Brownsville, Tex.....	Officers.....	38.67	875	.044
Studebaker, 1916.....	Eagle Pass, Tex.....	do.....	16.82	951	.018
Do.....	Fort Sam Houston, Tex.	do.....	182.08	1,509	.12
Total, 73.....			32,715.20	379,295	.0862

Automobiles in use June 30, 1916, in the Philippine Islands.

Machine.	Station.	By whom used.	Annual cost.	Mileage.	Cost per mile.
De Dion, 1912 (bus)....	Camp Hay.....	Quartermaster Corps..	\$1,685.22	8,288	\$0.208
Hupmobile, 1913.....	do.....	Post commander.....	1,049.05	5,572	.19
Mitchell, 1912.....	Manila.....	Attending surgeon....	292.13	2,950	.099
Overland, 1912.....	do.....	Department quarter- master.	504.80	5,438	.093
R. C. II., 1912.....	do.....	Quartermaster Corps..	169.72	1,540	.11
White, 1913 (bus).....	do.....	do.....	1,360.94	12,112	.112
White, 1912.....	do.....	Department Com- mander.	1,797.58	8,425	.213
White, 1912 (bus).....	Fort McKinley.....	Quartermaster Corps..	792.66	2,933	.27
Do.....	Manila.....	do.....	892.80	12,348	.072
Total, 9.....			8,544.90	59,606	.143

Automobiles purchased during the fiscal year 1916, except in the Philippine Islands.

Make.	Date purchased.	Serial number.	Cost.	Where used.
Dodge.....	June 29, 1916	74424	\$817.00	Philadelphia, Pa.
Do.....	June 27, 1916	73623	890.00	San Francisco, Cal.
Do.....	June 21, 1916	71608	898.08	Mexican border.
Do.....	June 26, 1916	73653	898.08	Do.
Do.....	do.....	74215	898.08	Do.
Do.....	June 29, 1916	56120	898.08	Do.
Do.....	do.....	9271	898.08	Do.
Do.....	June 16, 1916	74183	898.08	Do.
Do.....	June 20, 1916	73738	898.08	Do.
Do.....	do.....	73749	898.08	Do.
Do.....	May 30, 1916	69678	898.08	Do.
Do.....	Apr. 6, 1916	58821	898.08	Do.
Do.....	do.....	58826	898.08	Do.
Do.....	do.....	56663	898.08	Do.
Do.....	do.....	58823	898.08	Do.
Do.....	do.....	41955	910.00	Do.
Do.....	do.....	42157	910.00	Do.

Automobiles purchased during the fiscal year 1916, except in the Philippine Islands—
Continued.

Make.	Date purchased.	Serial number.	Cost.	Where used.
Dodge.....	Apr. 6, 1916	42154	\$910.00	Mexican border.
Do.....	do.....	39310	910.00	Do.
Do.....	do.....	39519	910.00	Do.
Do.....	do.....	46300	898.08	Do.
Do.....	do.....	49162	898.08	Do.
Do.....	do.....	50082	898.08	Do.
Do.....	do.....	50330	898.08	Do.
Do.....	do.....	39326	898.08	Do.
Do.....	do.....	44015	898.08	Do.
Do.....	do.....	39421	898.08	Do.
Do.....	do.....	50294	898.08	Do.
Do.....	do.....	53725	898.08	Do.
Do.....	do.....	50397	910.00	Do.
Do.....	Mar. 14, 1916	44624	898.08	Do.
Do.....	Mar. 28, 1916	40308	898.08	Do.
Do.....	Mar. 21, 1916	54839	898.08	Do.
Do.....	Mar. 17, 1916	54591	898.08	Do.
Do.....	May 28, 1916	69111	898.08	Do.
Do.....	do.....	69148	898.08	Do.
Do.....	May 30, 1916	69678	850.00	Do.
Do.....	May 11, 1916	65370	850.00	Do.
Do.....	May 18, 1916	65487	850.00	Do.
Do.....	May 15, 1916	65482	850.00	Do.
Do.....	May 11, 1916	65411	850.00	Do.
Do.....	May 29, 1916	68736	850.00	Do.
Do.....	May 8, 1916	59299	850.00	Do.
Do.....	May 12, 1916	66654	962.63	Do.
Do.....	May 18, 1916	66615	898.08	Do.
Ford.....	Nov. 2, 1915	944239	524.00	Do.
Do.....	Aug. 24, 1915	1102188	524.80	Do.
Do.....	Dec. 9, 1915	967524	524.00	Do.
Do.....	Nov. 2, 1915	925476	524.00	Do.
Do.....	Dec. 9, 1915	999176	524.00	Do.
Do.....	Nov. 2, 1915	930219	524.00	Do.
Do.....	do.....	57663	524.00	Do.
Do.....	Aug. 24, 1915	908229	524.80	Do.
Do.....	do.....	822296	524.80	Do.
Do.....	do.....	692215	524.80	Do.
Do.....	Sept. —, 1915	912883	440.50	Fort McIntosh, Tex.
Do.....	Feb. 2, 1916	1013035	570.00	Fort Miley, Cal.
Do.....	Nov. 2, 1915	930847	524.00	Mexican border.
Do.....	Dec. 1, 1915	948019	493.25	Do.
Do.....	Nov. 4, 1915	927881	550.00	Panama.
Do.....	Nov. 2, 1915	947530	500.00	Presidio of San Francisco, Cal.
Do.....	Dec. —, 1915	1005436	425.95	Fort Sam Houston, Tex.
Do.....	July 22, 1915	799834	566.85	San Francisco, Cal.
Do.....	Feb. 21, 1916	1006261	499.85	Do.
Do.....	Mar. 16, 1916	1010992	500.00	West Point, N. Y.
Do.....	Apr. —, 1916	1120883	523.85	Mexican border.
Do.....	do.....	1138829	523.85	Do.
Do.....	do.....	1138819	523.85	Do.
Do.....	do.....	1049638	523.85	Do.
Do.....	do.....	1086110	523.85	Do.
Do.....	do.....	1085915	523.85	Do.
Do.....	do.....	1086026	523.85	Do.
Do.....	do.....	1087711	523.85	Do.
Do.....	do.....	1085850	523.85	Do.
Do.....	May 24, 1916	1034868	525.00	Do.
Do.....	do.....	1079200	525.00	Do.
Do.....	May 28, 1916	1027423	466.10	Do.
Do.....	May 9, 1916	1171124	523.85	Do.
Railway motor car.....	Nov. 8, 1915	MC9	6,370.72	Panama.
Chevrolet.....	Apr. —, 1916	15489	863.50	Mexican border.
Studebaker.....	May 22, 1916	484478	850.00	Mexican border.
Do.....	do.....	484505	850.00	Do.
Do.....	May 25, 1916	483382	850.00	Do.
Overland.....	June 27, 1916	4728	1,000.00	St. Louis, Mo.
Jeffery.....	Nov. —, 1915	49954	1,200.00	Washington, D. C.
Oakland.....	June 26, 1916	337204	1,050.00	Mexican border.
Cadillac.....	Sept. 11, 1915	53A921987	2,250.00	Governors Island, N. Y.
Do.....	Sept. 20, 1915	A21505	2,261.45	Fort Sam Houston, Tex.
Do.....	Aug. 16, 1915	20443	2,000.00	Washington, D. C.
Total, 89.....			76,737.82	

EXHIBIT 21.

Motor trucks on hand June 30, 1916, except Philippines.

Make of truck.	Serial No.	Capacity (tons).	Location.	Miles run.	Tons hailed.	Tons. hailed 1 mile.
Packard.....	14467	3	San Francisco depot.....	6,459	2,883	6,726
Do.....	14468	3	do.....	7,030	2,609	6,087
Jeffery.....	70942	2	Mexican border.....	3,184	292	4,100
Do.....	70958	2	do.....	3,093	289	4,534
Do.....	70959	2	do.....	3,536	317	4,940
Do.....	70961	2	do.....	2,460	270	3,268
Do.....	70962	2	do.....	3,476	303	4,516
Do.....	70963	2	do.....	3,523	314	5,200
Do.....	70964	2	do.....	3,551	303	3,682
Do.....	70968	2	do.....	3,563	305	4,974
Do.....	70969	2	do.....	3,539	299	4,790
Do.....	70970	2	do.....	2,754	280	3,784
Do.....	70992	2	do.....	3,551	307	4,682
Do.....	72150	2	do.....	3,563	291	4,974
Do.....	72151	2	do.....	3,194	290	3,962
Do.....	72152	2	do.....	2,640	270	3,268
Do.....	72153	2	do.....	2,925	284	3,976
Do.....	72154	2	do.....	3,197	283	3,234
Do.....	72155	2	do.....	3,131	291	4,098
Do.....	72156	2	do.....	3,422	297	4,464
Do.....	72157	2	do.....	3,563	296	4,974
Do.....	72158	2	do.....	3,629	304	4,638
Do.....	72159	2	do.....	3,213	288	4,110
Do.....	72161	2	do.....	3,529	311	5,082
Do.....	72162	2	do.....	3,521	303	4,118
Do.....	72163	2	do.....	3,702	320	5,752
Do.....	72165	2	do.....	2,804	284	4,056
Do.....	72166	2	do.....	3,562	305	4,206
Do.....	72167	2	do.....	3,553	302	4,262
Do.....	39086	2	Eagle Pass, Tex.....	4,829	216	3,826
Do.....	39087	2	Panama.....	3,590	862	5,270
Do.....	54644	2	do.....	186	100	124
Do.....	54646	2	do.....	867	429	697
Do.....	54641	2	do.....	1,872	203	2,108
Do.....	54121	2	do.....	3,956	2,920	2,837
Do.....	54126	2	do.....	3,424	3,296	3,047
Do.....	54123	2	do.....	4,679	2,267	3,837
Do.....	39527	2	Aero squadron.....	3,933	813	4,279
Do.....	39531	2	do.....	4,491	950	4,086
Do.....	39581	2	do.....	4,484	970	4,652
Do.....	39589	2	do.....	4,988	1,095	4,563
Do.....	39565	2	do.....	4,630	880	4,740
Do.....	39563	2	do.....	1,896	416	2,943
Do.....	54135	2	do.....	2,884	464	3,967
Do.....	39557	2	Fort Sill, Okla.....	5,130	456	3,128
Do.....	54620	2	Fort Williams, Me.....	1,563	249	1,914
White.....	19748	1 1/2	Mexican border.....	8,594	204	7,573
Do.....	18753	1 1/2	do.....	4,158	249	3,318
Do.....	16552	1 1/2	do.....	3,368	403	5,397
Do.....	18714	1 1/2	do.....	9,124	516	14,504
Do.....	16795	1,500	Army War College.....	11,639	918	5,508
Do.....	20860	1 1/2	Fort Clark, Tex.....	8,459	1,060	9,667
Do.....	16639	1 1/2	Mexican border.....	5,972	2,100	2,097
Do.....	20812	1 1/2	do.....	6,217	1,083	4,891
Do.....	13250	3	do.....	2,072	1,791	2,621
Do.....	TBC4562	1 1/2	Hawaii.....	3,893	436	3,438
Do.....	TBC4559	1 1/2	do.....	3,669	342	3,242
Do.....	TBC4560	1 1/2	do.....	3,881	455	2,977
Do.....	TBC4561	1 1/2	do.....	3,828	658	3,545
Do.....	20846	1 1/2	do.....	10,212	1,389	8,438
Do.....	20842	1 1/2	do.....	9,325	801	8,106
Do.....	16616	1 1/2	do.....	9,570	839	8,181
Do.....	16640	1 1/2	Mexican border.....	1,650	247	1,101
Do.....	20836	1 1/2	Aero squadron.....	3,114	121	1,470
Do.....	20837	1 1/2	do.....	6,706	724	3,699
Do.....	.....	1 1/2	San Diego, Cal.....	3,207	490	2,399
Do.....	20843	1 1/2	San Francisco depot.....	9,391	1,322	3,144
Do.....	17578	5	do.....	6,757	3,877	9,036
Do.....	11465	3	do.....	6,043	2,548	5,943
Do.....	17372	1 1/2	Fort Sill, Okla.....	4,262	100	696
Do.....	13054	1 1/2	Washington, D. C.....	6,967	1,470	3,953
Do.....	13071	1 1/2	do.....	7,786	1,473	3,635
Do.....	13300	1 1/2	Washington Barracks, D. C.	5,969	489	3,321
Do.....	12866	3	West Point, N. Y.....	3,854	4,225	10,542
Do.....	31073	1 1/2	Mexican border.....	4,191	267	4,198
Do.....	31089	1 1/2	do.....	5,066	269	5,123
Do.....	31069	1 1/2	do.....	5,124	262	5,235
Do.....	31086	1 1/2	do.....	4,191	257	4,193

1 Pounds.

EXHIBIT 21.

Motor trucks on hand June 30, 1916, except Philippines.

8578.09	\$149.76	\$1,200.00	1 month, 23½ days..	Fair.....	Nov. 12, 1910	
893.79	97.16	1,180.00	26 days.....	do.....	do.....	
420.21	27.37	198.14	13½ days.....	Poor.....	Mar. 18, 1916	3 months, 13 days.
865.79	27.37	194.14	21	do.....	do.....	Do.
478.02	98.81	194.14	11	do.....	do.....	Do.
293.37	27.37	158.14	1	days.....	do.....	Do.
627.27	123.93	194.14	12	do.....	do.....	Do.
438.22	27.37	194.14	12	do.....	do.....	Do.
428.35	27.37	194.14	12	do.....	do.....	Do.
518.62	98.87	195.14	12	do.....	do.....	Do.
422.65	63.09	195.14	12	do.....	do.....	Do.
449.02	98.87	194.14	24	do.....	do.....	Do.
443.85	27.37	202.14	13	do.....	do.....	Do.
554.74	98.81	198.14	10	do.....	do.....	Do.
496.94	98.73	194.14	18	do.....	do.....	Do.
293.37	27.37	158.14	1	days.....	do.....	Do.
321.80	27.37	194.14	27	do.....	do.....	Do.
868.04	63.09	202.14	20	do.....	do.....	Do.
289.03	27.37	198.14	20	do.....	do.....	Do.
460.84	63.09	194.14	13	do.....	do.....	Do.
446.54	27.37	194.14	13	do.....	do.....	Do.
594.06	206.97	198.14	11	do.....	do.....	Do.
873.03	27.37	194.14	10	do.....	do.....	Do.
821.50	98.81	188.14	14	do.....	do.....	Do.
470.38	98.81	194.14	23	do.....	do.....	Do.
466.73	27.37	198.14	12	do.....	do.....	Do.
445.60	98.81	182.14	28	do.....	do.....	Do.
606.46	98.81	194.14	12	do.....	do.....	Do.
469.73	63.12	194.14	9½	do.....	do.....	Do.
597.65	151.35	686.03	8	days.....	June 11, 1914	
585.28	50.00	847.22	2	days.....	do.....	
31.09		24.46	20 days.....	do.....	Dec. -, 1915	2 months.
34.24		53.72	1 day.....	do.....	do.....	Do.
76.64		135.55	½ day.....	do.....	do.....	2 months.
320.63	125.40	477.22	12½ days.....	do.....	June 1, 1915	
330.67		455.22	10 days.....	do.....	do.....	
310.46	74.00	480.02	1 month, 19 days.....	do.....	do.....	
245.22		862.42	1 month, 26 days.....	Poor.....	Dec. 29, 1914	
223.24		386.02	1 month, 17 days.....	do.....	do.....	
180.40		350.42	1 month, 14 days.....	do.....	do.....	
211.88	18.00	407.92	22 days.....	do.....	do.....	
207.44		362.92	1 month, 12 days.....	do.....	do.....	
137.27		346.35	6 months, 2 days.....	do.....	do.....	
128.34		363.92	1 month, 12 days.....	do.....	Aug. 16, 1916	10 months.
275.55		563.22	2 months, 15 days.....	Serviceable....	Dec. -, 1914	
33.90		185.59		Good.....	Nov. 1, 1915	4 months.
908.81	101.70	606.83	3 months, 29 days.....	Poor.....	Jan. 15, 1914	
666.04	114.40	591.10	3 months, 17 days.....	Good.....	May 9, 1914	
447.02	106.32	316.23	7 months, 18 days.....	Unserviceable..	Mar. 16, 1913	
827.44	58.00	792.96	1 month.....	Good.....	June 11, 1914	
202.19	58.10	720.00		do.....	Jan. 23, 1913	
520.10	163.00	591.22	19 days.....	do.....	June 11, 1914	
205.51	74.85	569.05	1 month, 4 days.....	Poor.....	Mar. 18, 1913	
340.25		924.05	1 month, 28 days.....	do.....	May 7, 1914	
617.64	161.24	626.22	3 months, 13 days.....	Unserviceable..	Dec. 9, 1911	
73.60		255.61		Good.....	Dec. 1, 1915	6 months.
68.91		305.61	10 days.....	do.....	do.....	Do.
117.61		281.61	7 days.....	do.....	do.....	Do.
68.81		269.61		do.....	do.....	Do.
622.78	171.64	521.22	3 months, 12½ days.....	Fair.....	June 11, 1914	
355.02	56.88	567.22	2 months, 17½ days.....	do.....	do.....	
760.21	270.39	615.22	1 month, 19½ days.....	do.....	Mar. 18, 1913	
185.16		412.87	5 months, 1 day.....	Good.....	do.....	
106.17		381.22	5 months, 9 days.....	Unserviceable..	June 11, 1914	
374.99		324.42	1 month, 22 days.....	Good.....	do.....	
166.99		326.15	15 days.....	Fair.....	Apr. 22, 1913	
310.15		1,000.00	4½ days.....	do.....	June 11, 1914	
632.29	219.59	1,200.00	1 month, 13 days.....	do.....	Nov. 15, 1913	
702.21	204.49	1,200.00	1 month, 4½ days.....	do.....	Apr. 10, 1911	
272.20	58.00	689.22	2 months, 26 days.....	Unserviceable..	July 23, 1913	
311.02	83.20	810.00		Good.....	Dec. 19, 1911	
347.90	167.55	885.00		do.....	July 2, 1912	
157.87	46.18	563.22		do.....	Aug. 23, 1911	
557.60	279.08	491.22	2 months, 12½ days.....	do.....	Sept. 9, 1911	
470.97	147.96	126.68	7½ days.....	Serviceable....	Mar. 14, 1916	3½ months.
422.60	118.40	126.68	8½ days.....	do.....	do.....	Do.
422.26	89.44	126.68	7 days.....	do.....	do.....	Do.
278.68	69.44	126.68	6½ days.....	do.....	do.....	Do.

Motor trucks on hand June 30, 1916, except Philippines—Continued.

Make of truck.	Serial No.	Capacity (tons).	Location.	Miles run.	Tons hauled.	Tons. hauled 1 mile.
White	31096	1½	Mexican border.....	5,124	262	5,238
Do.....	31057	1½	do.....	4,312	257	4,735
Do.....	31075	1½	do.....	5,056	259	5,133
Do.....	31045	1½	do.....	4,056	259	5,133
Do.....	31080	1½	do.....	5,056	259	5,133
Do.....	31088	1½	do.....	5,124	262	5,235
Do.....	31091	1½	do.....	5,056	259	5,133
Do.....	31062	1½	do.....	4,672	258	4,510
Do.....	31101	1½	do.....	5,117	262	5,235
Do.....	31058	1½	do.....	5,124	262	5,235
Do.....	31042	1½	do.....	5,057	259	5,133
Do.....	31074	1½	do.....	5,124	262	5,235
Do.....	31026	1½	do.....	4,259	260	4,295
Do.....	31035	1½	do.....	5,056	273	5,133
Do.....	31032	1½	do.....	5,174	275	5,310
Do.....	31063	1½	do.....	5,056	259	5,133
Do.....	31064	1½	do.....	4,287	270	4,264
Do.....	31037	1½	do.....	5,124	262	5,235
Do.....	31039	1½	do.....	5,124	262	5,235
Do.....	31098	1½	do.....	5,152	260	5,205
Do.....	31070	1½	do.....	4,191	257	4,192
Do.....	31059	1½	do.....	4,191	257	4,192
Do.....	31076	1½	do.....	5,124	261	5,235
Mack.....	2971	1½	do.....	9,139	386	7,466
Do.....	2970	1½	do.....	7,205	333	6,122
Do.....	1198	1½	Washington, D. C.....	4,478	766	1,694
Kelly-Springfield.	4017	1½	Fort Bayard, N. Mex.....	3,984	221	1,287
Do.....	6547	2	Chicago, Ill.....	3,858	790	2,674
Do.....	5977	3	Fort Worden, Wash.....	1,014	864	1,868
Duplex.....	501	2	Fort Barry, Cal.....	3,789	1,268	11,816
Do.....	502	2	Presidio of San Francisco...	5,274	1,758	5,358
Lippard-Stewart.	2045	1½	Mexican border.....	4,278	1,256	3,641
Do.....	2047	1½	do.....	1,578	233	1,433
Do.....	2046	1½	do.....	5,917	1,504	3,644
Velle.....	3006	1½	do.....	3,140	895	3,354
Do.....	3005	1½	do.....	5,248	862	3,424
Do.....	3002	1½	do.....	3,434	1,410	2,408
Do.....	3003	1½	do.....	5,916	751	7,095
Do.....	3004	1½	do.....	8,296	1,344	2,863
Driggs-Seabury...	21426	2	New York, N. Y.....	5,103	880	1,716
Ford.....	1062012	Delivery.	Eastern Department.....	3,434	75	888
Do.....	1029933	Delivery.	do.....	4,472	80	798
Do.....	1015922	Delivery.	do.....	2,324	76	702
Do.....	1029870	Delivery.	do.....	3,215	100	925
Do.....	1038116	Delivery.	do.....	2,872	56	506
Do.....	1029938	Delivery.	do.....	3,060	75	798
Do.....	925820	Delivery.	Fort Hamilton, N. Y.....	30		
Do.....	953572	Delivery.	Panama.....	1,587	101	276
Do.....	584466	Delivery.	San Francisco depot.....	9,010		
Do.....	616564	Delivery.	do.....	4,793		
Federal.....	2061	1½	El Paso, Tex.....	4,036	966	2,907
Mais.....	142	1½	Mexican border.....	1,824	837	1,414
Do.....	140	1½	Fort Leavenworth, Kans....	2,059	106	1,029
Do.....	69	1½	Fort Sheridan, Ill.....	4,878	551	1,456
Peerless.....	30689	3	Hawaii.....	3,024	554	3,463
Garford.....	66661	1½	Panama.....	1,275	332	949
Electric.....	1174	5	Philadelphia depot.....	876	933	1,746
Do.....	C	1	do.....	1,061	1,645	739
Studebaker.....	11044	1½	Fort Rosecrans, Cal.....	9,815	594	6,851
Do.....	11080	1½	do.....	8,065	917	6,495
Clintonville Four- Wheel Drive.	AG5	1½, 500	San Diego, Cal.....	1,627	450	787
Do.....	452	3	Fort Sill, Okla.....	1,515	273	1,591
Gramm.....	102061	2	San Francisco depot.....	4,817	1,153	2,900
Lord-Baltimore...	1017	1½	San Juan, P. R.....	5,134	100	4,843
Wilcox.....	10411	1½	Washington, D. C.....	6,764	1,555	3,965
Alco.....	324	2	West Point, N. Y.....	4,755	3,857	10,898
Do.....	477	3½	do.....	4,062	4,753	12,928
Buick.....	128045	1½, 500	do.....	8,393	1,067	3,568
Do.....	128038	1½, 500	do.....	7,482	1,358	3,742
Total.....				652,808	105,604	605,845

1 Pounds.

Average cost per ton mile \$0.0946, exclusive of chauffeur.

Motor trucks on hand June 30, 1916, except Philippines—Continued.

Cost operation, exclusive of chauffeur.	Cost of tires.	Wages of chauffeur, including rations and clothing.	Time laid up.	Condition at end of fiscal year.	Date purchased.	Time in operation less than 1 year.
\$416.71	\$89.44	\$136.68	6½ days.....	Serviceable...	Mar. 14, 1916	3½ months.
423.97	118.40	136.68	6 days.....	do.....	do.....	Do.
485.93	118.40	136.68	6½ days.....	do.....	do.....	Do.
501.55	118.40	136.68	12 days.....	do.....	do.....	Do.
542.48	147.36	136.68	9½ days.....	do.....	do.....	Do.
552.44	196.32	136.68	8 days.....	do.....	do.....	Do.
582.62	142.88	136.68	8½ days.....	do.....	do.....	Do.
495.84	167.36	136.68	5 days.....	do.....	do.....	Do.
490.08	147.36	136.68	5½ days.....	do.....	do.....	Do.
552.96	147.36	136.68	9½ days.....	do.....	do.....	Do.
505.63	69.44	136.68	8 days.....	do.....	do.....	Do.
473.90	93.92	136.68	8 days.....	do.....	do.....	Do.
410.63	20.48	136.68	15 days.....	do.....	do.....	Do.
500.78	44.96	136.68	12½ days.....	do.....	do.....	Do.
518.27	167.18	136.68	7½ days.....	do.....	do.....	Do.
353.82	20.48	136.68	5½ days.....	do.....	do.....	Do.
553.16	167.36	136.68	15 days.....	do.....	do.....	Do.
480.80	69.44	136.68	11 days.....	do.....	do.....	Do.
465.53	44.96	136.68	11½ days.....	do.....	do.....	Do.
382.53	44.96	136.68	4½ days.....	do.....	do.....	Do.
329.88	20.48	136.68	6 days.....	do.....	do.....	Do.
309.62	20.48	136.68	15 days.....	do.....	do.....	Do.
413.93	69.44	136.68	5 days.....	do.....	do.....	Do.
714.83	162.00	803.90	1 month, 14 days....	Good.....	June 11, 1914	
1, 147.31	342.00	780.74	4 months, 17 days...	Unserviceable.	do.....	
147.98	.....	720.00	1 month.....	do.....	Nov. 21, 1911	
129.40	.....	234.15	.....	Good.....	Nov. 1, 1915	5 months.
230.57	65.46	1, 147.93	.....	do.....	June 11, 1914	
360.78	.....	290.43	22 days.....	do.....	Nov. 1, 1915	Do.
266.91	107.00	502.09	1 month, 9 days....	do.....	February, 1915	Hauls trailers.
715.00	65.42	580.22	1 month, 5½ days....	Fair.....	March, 1915	
269.18	.....	803.22	9 days.....	Good.....	June 11, 1914	
220.40	.....	449.65	9 months, 3 days....	do.....	do.....	
370.04	.....	845.21	1 month, 8 days....	Poor.....	do.....	
254.90	.....	624.20	1 month, 16 days....	Good.....	do.....	
347.37	92.42	833.61	5 months.....	Poor.....	do.....	
291.40	.....	965.34	3 months, 2 days....	do.....	do.....	
439.36	.....	715.69	2 months, 17 days..	do.....	do.....	
1, 157.82	378.60	655.13	17 days.....	do.....	do.....	
522.30	133.30	900.00	1 month, 2 days....	Fair.....	do.....	
233.33	29.63	35.43	1 month, 1 day.....	Good.....	Jan. 19, 1916	3 months.
122.31	29.63	62.23	7 days.....	do.....	do.....	Do.
90.78	29.63	40.57	.....	do.....	do.....	Do.
239.93	32.13	47.08	1 month.....	do.....	do.....	Do.
300.13	29.63	34.71	1 month, 5 days....	do.....	do.....	Do.
238.85	32.48	37.45	1 month.....	do.....	do.....	Do.
25.04	.....	.....	14 days.....	do.....	do.....	1 month.
58.01	10.65	166.46	.....	do.....	Nov. 18, 1915	6 months.
178.82	44.73	880.00	14½ days.....	do.....	Mar. 8, 1915	
214.69	102.60	.....	.....	do.....	Mar. 6, 1915	
153.70	.....	887.79	1 month, 14 days...	Poor.....	June 11, 1914	
341.78	62.56	1, 142.32	3 months, 3 days....	do.....	Received from Medical Department.	
250.25	168.24	.....	3 months, 15 days..	do.....	do.....	
344.38	42.23	422.42	2 months, 3 days....	do.....	do.....	
84.99	.....	216.44	.....	Good.....	Mar. 1, 1916	4 months.
29.55	.....	46.72	1 day.....	do.....	March, 1916	2 months.
212.93	.....	263.90	.....	Poor.....	June 26, 1907	
115.11	.....	486.76	1½ days.....	Good.....	Jan. 19, 1912	
697.93	115.58	684.53	29 days.....	Fair.....	June 2, 1914	
879.29	104.69	587.04	22 days.....	do.....	do.....	
104.76	.....	285.54	2 months, 10 days..	Poor.....	Jan. 11, 1912	
86.52	.....	313.44	2 months, 7 days....	do.....	July 8, 1915	7 months.
522.02	68.20	1, 200.00	4 months, 7 days....	do.....	Received from Subsistence Department.	
508.40	162.50	667.22	6 months, 13 days...	do.....	June 11, 1914	
321.50	77.78	1, 200.00	.....	do.....	Sept. 19, 1911	
596.14	261.02	543.22	2 months, 17 days..	Good.....	Dec. 20, 1912	
710.30	386.48	494.22	3 months, 4 days....	do.....	do.....	
531.39	265.53	524.22	1 month, 10½ days...	do.....	Dec. 4, 1914	
550.48	303.06	492.22	1 month, 24½ days...	do.....	do.....	
57, 136.68	11, 256.95	57, 990.80	.....	.....	.....

EXHIBIT 22.

Motor trucks in use in Philippine Islands, June 30, 1916.

Make.	Station.	By whom used.
Couple Gear, 1913.....	Manila.....	Quartermaster Corps.
Delahaye, 1913.....	Camp John Hay..	Do.
De Dion, 1913.....	do.....	Do.
Ford, 1914.....	Manila.....	Do.
Ford, 1915.....	do.....	Do.
Jeffery, 1914.....	do.....	Do.
Jeffery, 1915.....	do.....	Do.
Peerless, 1914.....	Camp John Hay..	Do.
Peerless, 1913.....	do.....	Do.
Do.....	do.....	Do.
Do.....	do.....	Do.
White, 1912.....	Manila.....	Do.
Do.....	do.....	Do.
Do.....	do.....	Do.
Do.....	do.....	Do.
Do.....	do.....	Do.
Do.....	Fort McKinley...	Do.
White, 1914.....	Manila.....	Do.
White, 1913.....	Camp Keithley...	Do.
Do.....	do.....	Do.

Total, 20.

EXHIBIT 23.

Philippine Islands—Tabulation of imports received from posts in the Philippine Department regarding Lauan versus Oregon pine.

Post.	Preference as to suitability.	Preference as to durability.	Cheaper to put in place.
Angur Barracks.....	Equal.....	Oregon pine.....	Equal.
Camp Eldridge.....	Oregon pine.....	do.....	Oregon pine.
Camp John Hay.....	Equal.....	do.....	Equal.
Camp Keithley.....	Oregon pine.....	do.....	Do.
Camp McGrath.....	Lauan.....	Lauan.....	Lauan.
Camp Nichols.....	Oregon pine.....	Oregon pine.....	Equal.
Camp Overton.....	do.....	do.....	Oregon pine.
Camp Stotsenburg.....	do.....	do.....	Do.
Fort Mills.....	do.....	do.....	Do.
Fort San Pedro.....	Lauan.....	Lauan.....	Lauan.
Fort William McKinley.....	Oregon pine.....	Oregon pine.....	Oregon pine.
Ludlow Barracks.....	Equal.....	Equal.....	Equal.
Pettit Barracks.....	do.....	do.....	Do.
Regan Barracks.....	do.....	do.....	Oregon pine.
Warwick Barracks.....	Lauan when protected from the weather.	Lauan.....	Lauan.
Depot quartermaster, Manila.....	Oregon pine.....	Oregon pine.....	Oregon pine.

RECAPITULATION.

Lauan.....	3	3	7
Oregon pine.....	8	10	8
Equal.....	5	3	6

EXHIBIT 24.

Philippine Islands—Ice, cost per 100 pounds.

Station.	Net cost of ice per 100 pounds as manufactured.	Depreciation at 10 per cent per annum per 100 pounds.	Total cost of ice per 100 pounds.
Augur Barracks.....	\$0.2812	\$0.04	\$0.3212
Camp Eldridge.....	.2009	.0247	.2256
Camp John Hay.....	.2762	.043	.3192
Camp Keithley.....	.2588	.036	.2948
Camp McGrath.....	.1692	.0311	.2002
Camp Overton.....	.2387	.0266	.2653
Camp Stotsenburg.....	.1642	.0267	.1909
Fort Mills.....	.1178	.014	.1318
Fort San Pedro, Iloilo.....	¹ .394	.065	.459
Fort William McKinley.....	.1533	.0332	.1865
Ludlow Barracks.....	.2023	.0315	.2338
Pettit Barracks.....	.1736	.0391	.2127
Regan Barracks.....	.191	.0397	.2307
Warwick Barracks.....	.3442	.061	.4052

¹ Should be slightly less, but the exact amount of distilled water to be credited can not be determined.

EXHIBIT 25.

Cost per 1,000 gallons of water pumped at posts in the Philippine Department.

[The following costs of pumping water at the several posts in the Philippine Department are based upon the reports of water systems for one year from Apr. 1, 1915, to Mar. 31, 1916.]

Station.	Actual cost of operating pumps and incidentals for ordinary repairs.	Estimated cost to be added for depreciation based on value of plant and equipment.	Estimated cost to be added to cost of coal stated in report to cover drayage.	Net estimated cost per 1,000 gallons.	Remarks.
Augur Barracks.....	\$0.06	\$0.016	\$0.012	\$0.078	Low head; required to handle coal; ship to pile, pile to wagon, wagon to plant.
Camp Keithley.....	.19	.064	None.	.254	High head; wood fuel delivered at plant.
Camp McGrath.....	.13	.03	.028	.188	High head; coal handled; scows to coal shed on beach, coal shed to wagon, wagon to plant.
Camp Nichols.....	.04	.06	.003	.103	Low head; internal-combustion engine pump; uses mineral oil.
Fort William McKinley.	.081	.053	None.	.134	Deep wells, high head; coal delivered on scow to plant.
Ludlow Barracks....	.089	.06	.035	.174	Very high head; coal, same as Augur Barracks.
Pettit Barracks.....	.147	.033	.01	.19	Very low head; coal, ship to car, car to plant.
Regan Barracks.....	.065	.022	.02	.107	High head; same as Augur Barracks, except longer haul.
Warwick Barracks..	.103	.027	.01	.14	Low head; same as Augur Barracks, except shorter haul.
Camp John Hay ¹					Very high head.
Camp Stotsenburg ²					High head.
Fort Mills ³					Very high head.

¹ Now all electrical power; not sufficient length of time in operation to determine cost.

² New plant ready to install at new wells; old wells failed.

³ Plant not completed; data on hand too variable to quote.

Comparison of estimated cost of water in 39 pumping plants in Massachusetts with those of the Quartermaster Corps in the Philippine Department.

	Massachusetts.	Philippines.
Average.....	\$0.115	\$0.151
Minimum.....	.065	.078
Maximum.....	.257	.254

Do.	Hospital.	C. & R. H.	do.	All funds allotted have been expended. Additional funds will be required during fiscal year 1917.
Camp Overton.	Resurfacing and repairs to O. K. Road.	R. W. W. & D.	2,390.23	
			27,494.26	
Do.		S. S. & T., Q. M. C.	2,378.08	Completed.
Do.		do.	100.00	do.
Do.		do.	663.64	do.
Do.		B. & Q., P. I.	1,556.10	do.
Do.		do.	209.50	do.
Camp Stotsenburg.	off.	do.	313.99	do.
	coar' quarters.			
Do.	Laundry machinery.	S. S. & T., Q. M. C.	1,632.08	do.
Do.	Reservoir, Tiptle Creek.	do.	292.00	do.
Do.	Swamp drainage.	R. W. W. & D.	500.00	do.
Do.	Equipment, new wells.		1,545.00	do.
Do.	Drainage ditches.		1,007.43	do.
Do.	Piping water to ice plant.		241.17	do.
Do.	Saddler and blacksmith shops.		1,914.90	do.
Do.	Concrete reservoir.		6,525.92	do.
Do.	Walks and retaining wall.		1,669.00	do.
Do.	Road to Dao.		4,000.00	do.
Do.	18 sets officers' quarters.	B. & Q., P. I.	32,084.44	do.
Do.	1 administration building.	do.		do.
Do.	1 guardhouse.	S. S. & T., Q. M. C.	646.28	do.
Depot quartermaster, Tientsin.				
Do.		B. & Q., P. I.	310.00	do.
Fort Mills.		S. S. & T., Q. M. C.	6,260.42	do.
Do.	infantry	do.	2,000.00	do.
Do.		M. P. E.	11,400.00	do.
Do.		B. & Q., P. I.	641.55	do.
Do.		do.	6,466.47	do.
Do.	icbs.	do.	264.22	do.
Do.		S. S. & T., Q. M. C.	876.09	do.
Do.		R. W. W. & D.	459.28	do.
Do.		B. & Q., P. I.	19,539.00	do.
Do.		R. W. W. & D.	6,000.00	Under way.
Do.		S. S. & T., Q. M. C.	380.00	Completed.
Do.		R. W. W. & D.	15,254.28	do.
Do.		S. S. & T., Q. M. C.	192,850.00	do.
Do.	Infantry	do.	7,480.00	Completed.
Do.	f.	do.	700.00	do.
Do.		do.	1,500.00	do.
Do.		do.	9,488.00	do.
Do.	marine	B. & Q., P. I.	44,067.17	60 per cent completed.
Do.	try bar.	S. S. & T., Q. M. C.	3,900.00	Completed.
Do.		do.	802.00	do.

Contract with civil government.

Completed as far as funds allotted. Additional funds to be allotted during fiscal year 1917.

Do.....	Sagpan River bridge.....	B. W. W. & D.....	229.75	.....do.....
Do.....	Cogon Creek bridge.....	.....do.....	204.20	.....do.....
Do.....	Cemetery fence.....	S. S. & T., Q. M. C.....	250.56	.....do.....
Warwick Barracks.....	Bachelor officers' quarters.....	B. & Q., P. I.....	406.96	.....do.....
Do.....	New fire apparatus.....	S. S. & T., Q. M. C.....	466.08	.....do.....
Total.....	.....	.....	621,207.00	.....

EXHIBIT 27.

From the apportionments made to the Philippine Department from the 1916 appropriations, the following amounts were allotted for new construction, annual repairs, special repairs, alterations and extensions, rentals, purchase of water, and purchase of electric current:

Appropriations.	New construction.	Annual repairs.	Special repairs, alterations and extensions.
B. & Q., U. S.	\$310.00		\$500.00
S. S. & T. Q. M. C., 1916	272,231.36	\$46,243.76	37,378.15
S. S. & T. Q. M. C., 1915-16	75,000.00		
M. P. E.	1,697.50	2,215.34	1,869.02
R. W. W. & D.	95,364.71	43,076.10	8,369.60
B. & Q. P. I.	133,935.31	121,846.84	20,698.52
C. & R. H.	22,208.42	12,746.40	1,074.17
S. G. & R.	460.12	8,437.11	419.00
H. S. Q.		551.48	
Totals:			
New construction			\$621,207.42
Repairs			235,117.03
Specials, etc.			70,307.46
Total			926,631.91
Rentals:			
B. & Q. P. I.			3,673.41
B. & Q. U. S.			35,915.50
S. G. & R.			321.30
Total			39,912.21
Water: S. S. & T. Q. M. C.			21,061.86
Electric current:			
S. S. & T. Q. M. C., Manila			19,968.82
S. S. & T. Q. M. C., Fort William McKinley			27,547.90

EXHIBIT 28.

The following amounts for new construction, annual repairs, and special repairs, alterations, and extensions were allotted the different posts and stations in the Philippine Department from the 1916 apportionment:

	New construction.	Annual repairs.	Special repairs, alterations, and extensions.
Headquarters and Manila	\$15,427.44	\$38,415.26	\$4,066.72
Augur Barracks	96.44	8,149.63	3,624.62
Camp Eldridge	3,176.60	7,540.78	1,651.20
Camp Gregg		918.26	
Camp John Hay	57,199.25	28,829.88	10,299.28
Camp Keithley	4,245.83	4,270.44	2,084.24
Camp McGrath		9,004.94	1,157.94
Camp Nichols	5,377.18	491.72	1,256.60
Camp Overton	32,481.53	9,311.36	8,016.04
Camp Stotsenburg	51,765.97	22,299.40	2,785.90
Fort Mills	382,524.51	23,955.08	17,040.25
Fort San Pedro	3,758.11	4,261.74	663.10
Fort William McKinley	34,329.62	51,675.74	10,774.49
Ludlow Barracks	2,039.12	8,969.52	462.50
Pettit Barracks	1,300.00	5,964.73	310.20
Regan Barracks	5,656.55	8,072.49	3,292.66
Warwick Barracks	873.04	2,784.06	1,037.71
China	956.23	202.00	1,874.01
Totals:			
New construction			\$621,207.42
Repairs			235,117.03
Special, etc.			70,307.46
Total			926,631.91

REPORT OF THE SURGEON GENERAL.

REPORT OF THE SURGEON GENERAL.

WAR DEPARTMENT,
OFFICE OF THE SURGEON GENERAL,
Washington, September 1, 1916.

The SECRETARY OF WAR.

SIR: I have the honor to submit herewith the annual report upon the work of the Medical Department. This covers a study of the health and sanitary conditions of the Army for the calendar year 1915, and a financial statement for the fiscal year ending June 30 1916. I desire here to invite attention to certain matters of interest in this report.

GEOGRAPHICAL DISTRIBUTION.

The United States Army, aggregating approximately 100,000 men, had during the year 1915 a wide geographical range in its various activities. Troops were stationed in greater or less numbers from the sixty-sixth meridian of west longitude to the one hundred and fifteenth meridian east of Greenwich, and from the sixty-fourth degree north latitude to within 7° of the equator; distributed over two hemispheres, literally, from St. Michael to Mindanao, and from Porto Rico to Pekin.

The significance of this far-extended field of action in its relation to the health and disease of the Army is readily appreciated by the most superficial investigator, and to the student of vital and social statistics and their application to the comparative study of races and nations, it assumes a particular importance.

The medical officers of the Army in their capacity of sanitary advisers to the line, have thus had the opportunity of studying and applying the recent advances of modern preventive medicine under the most varied and interesting conditions.

In all the changing circumstances of garrison, camp, and field, the work of the Medical Corps has measured well up to the best traditions and to the highest standards of the profession. The success they have achieved is the result of earnest and painstaking effort coupled with the most important factors—the sympathetic cooperation and loyal support of those they served.

The following are the officers who have held, during the last year, the responsible position of department surgeon in the several military departments of the Army:

Col. Charles Richard, Medical Corps.
Col. Rudolph G. Ebert, Medical Corps.
Col. William H. Arthur, Medical Corps.
Col. Henry P. Birmingham, Medical Corps.
Col. William Stephenson, Medical Corps.
Col. Guy L. Edie, Medical Corps.

Col. William D. Crosby, Medical Corps.
Col. Charles M. Gandy, Medical Corps.
Col. Walter D. McCaw, Medical Corps.
Col. Henry S. T. Harris, Medical Corps.

GENERAL HEALTH OF THE ARMY.

The general health of the Army was excellent during the year 1915. There were no epidemics or unusual incidence of infectious diseases.

The mean strength of the entire Army for the calendar year 1915, upon which the statistics contained in the annual report are based, was 103,842.

The noneffective rate for the entire Army for 1915, from all causes, was 25.22 per 1,000 (for disease alone 20.85), which is slightly higher than that for 1914, the lowest noneffective rate in the history of the Army; but still much below the rates for any preceding year, except 1913, when the rate was 23.98. The noneffective rate during the past decade shows a steady reduction. In 1906 it was 47.86 per 1,000.

The admission rate for the entire Army for 1915, was 726.19, as compared with 660.45 per 1,000 for 1914. With the exception of 1913-14, the 1915 admission rate is the lowest in the last 10 years. The admission rate shows a marked decline since 1906, when it was 1188.00 per 1,000.

The death rate of the entire Army for 1915, from all causes, was 4.45 per 1,000, compared with 4.40 for 1914, which was the lowest mortality rate in the Army for many years. The death rate from disease was 2.53 per 1,000 for 1915; the same rate for 1914 was 2.35, and that for 1906 was 3.77.

The discharge rate for the year 1915, from all causes, was 14.06 per 1,000, somewhat higher than 1914, when the rate was 12.78 per 1,000, but still markedly less than the discharge rates prior to 1910, when they ranged from 16.64 upward.

The total losses of the Army, from all causes: Deaths, discharges, and retirements, was 18.03 per 1,000 for 1915; for the year 1914 it was 16.86, the lowest in the past decade.

Malarial fevers show the lowest noneffective rate in the history of the Army, 0.54. In 1906 the noneffective rate for malarial fevers alone was 2.55 per 1,000. The decade following has demonstrated the effectiveness of the antimalarial measures that have been unceasingly employed by the sanitary officers of the Army each year, exhibiting, with but two exceptions, a marked decrease in the incidence of the disease.

The record in the Philippines has been specially creditable compared with former years, though here, as in the Canal Zone, the Medical Department has been at some disadvantage, through lack of screening or other antimosquito requisites, due to insufficient appropriation of funds for this important work. There should be no further delay in properly screening all buildings in the Tropics occupied as hospitals, barracks, or quarters.

The highest noneffective rate, for disease alone, for 1915 was among the troops stationed in China, 31.78 per 1,000. Then follows in order: Panama with 21.66; the Philippine Islands with 21.42; the

United States, 20.90; Porto Rico, 20.57; and Hawaii and Alaska with the lowest noneffective rates for the year 1915, 16.20 for Hawaii and 6.02 for Alaska.

TYPHOID FEVER.

There were eight cases of typhoid fever in the entire Army during the year 1915; no deaths resulted, all making good recoveries. Of the eight cases mentioned, four only occurred within the continental limits of the United States; the four other cases of typhoid fever were reported from Hawaii.

During the Spanish-American War, from May 1, 1898, to June 30, 1899, the total number of deaths in our armies, Regular and Volunteer, was 6,619. This was equivalent to an annual mortality rate of 33.03 per 1,000 of strength; the rate for disease alone being 25.68. Typhoid fever was accountable for more than one-half of the deaths from disease. The total number of deaths from typhoid fever was 2,774—equal to an annual rate of 13.84 per 1,000.

In the United States the regulars lost 361 and the volunteers 1,890 from this fever; these numbers being equivalent to the respective rates of 7.78 and 18.21 per 1,000 of strength.

The record of the fight against typhoid fever in the United States Army during the decade and a half since the Spanish War, constitutes one of the most interesting and brilliant chapters in the history of preventive medicine, beginning with the epoch making investigation of the "Typhoid Fever Board" into the manner of infection and dissemination of the disease in the military camps of 1898, and culminating 12 years later in the equally notable adoption of antityphoid vaccination in the United States Army.

The results following compulsory vaccination in the Army are now well known and are exemplified by the record of the present year.

MALARIAL FEVERS.

Malarial fevers no longer occupy the high place of a few years past in the sanitary statistics of the Army, when they ranked well up to the top of the list of those diseases producing the greatest admission and noneffective rates in our service. These rates have been steadily falling for the past decade, with the exception of the year 1912, when an unavoidable exposure of troops in a tropical campaign occurred with a resulting increase in the number of cases. The control of the disease in the Philippines since that time deserves special notice.

The admission and noneffective rates for the year 1915 for these fevers are the lowest in our experience in the Far East. This result has been achieved in spite of a serious sanitary handicap existing at certain of the posts where lack of screening in barracks and quarters and a badly malarial infected native population in close proximity makes the task a discouraging and difficult one. Appropriation of adequate funds for the proper screening of all hospitals, barracks, and quarters in the Philippine Islands should not be further delayed.

The admission rate for the entire Army during 1915 was 25.16 per 1,000, and the noneffective rate was 0.54 per 1,000.

MEASLES.

Measles is a disease rarely considered as serious by the layman and the practitioner, who see only an occasional isolated case without complications. Under ordinary conditions the mortality from the disease itself is not high, but in certain epidemics occurring among nonimmune (native) populations, in large institutions, schools, and armies, pulmonary and middle-ear complications make measles the most formidable and deadly of the eruptive fevers.

In the United States Army, outside of the recruit depots, but few cases of measles occur, and these usually in a mild form. The experience with the disease at several of our recruit depots has been quite otherwise, however. At these depots, during the winter months the period of most active recruiting, large numbers of young adults are assembled for instruction and equipment. A great many of these youths are from the country districts and particularly susceptible to infectious disease. Given cold weather, necessitating indoor life, an overcrowded barracks, young and nonimmune individuals in connection with the appearance of a specially virulent form of measles such as has repeatedly prevailed at Columbus Barracks, Ohio, and Jefferson Barracks, Mo., and you have the conditions which make an epidemic of measles much more to be feared than smallpox.

As has been stated, respiratory complications, particularly bronchopneumonia and empyema, together with frequent involvement of the middle ear, inevitably results in a high mortality and discharge rate.

The insidious onset of this disease among recruits and its rapid spread, when once started, through congested quarters, has, in the past, necessitated the cessation of recruiting for months and the rapid evacuation of the depots; all ordinary methods for the control of those epidemics having proved unavailing.

The chief factor in the spread of measles, as it has appeared in our Army, has resulted almost always from the overcrowding of susceptible and infected recruits.

Before another season brings its usual round of cases, complications, and criticisms, prompt steps should be taken by the proper authority to provide at all of these recruit depots, and particularly at Columbus Barracks, Ohio, and Jefferson Barracks, Mo., the much-needed and often-recommended additional barracks.

TUBERCULOSIS.

Tuberculosis is the cause of the highest death rate in all armies under peace conditions, differing in no way in this respect from the experience among the civilian population, where it produces the greatest mortality of any infectious disease.

In the United States it has been stated that tuberculosis is responsible for approximately one-tenth of the deaths annually.

The difficulty of recognizing this disease in its early stages accounts in part for its appearance among soldiers in spite of the rigid and thorough physical examination to which they are subjected on admission into the service.

All cases of tuberculosis among American troops are sent, without delay, to the United States Army General Hospital, Fort Bayard, N. Mex., for prolonged treatment, if necessary, under climatic and

other conditions most favorable for the arrest of the disease. The Army General Hospital at Fort Bayard, N. Mex., is intended, primarily, only for those who have pulmonary tuberculosis. The highly creditable record of cases in this hospital, for a decade or more, under the command of Col. George E. Bushnell, Medical Corps, a very distinguished authority on all that relates to tuberculosis, has been a gratifying feature of Army medical administration.

The admission rate for this disease for the entire Army for 1915 was 3.49 per 1,000.

VENEREAL DISEASES.

Venereal diseases still continue to constitute in the Army of the United States, as in those of other countries, a very serious factor against military efficiency of the Army, just as in civil life these same diseases occupy a similar commanding and threatening position in their relation to the welfare and usefulness of the community and State.

It should be clearly understood that the Army sanitarians and the military authorities generally are fully aware at this time, as they have been for many years past, of the necessity and importance of attacking and limiting by every possible means these so-called social diseases. To that end there have been formulated and put into vigorous operation measures designed to control to the greatest degree possible these infections, which always have their origin, so far as the soldier is concerned, quite outside of his military life and duties and far removed from any military authority or discipline. It is believed that no more comprehensive system of attack against a disease has ever been instituted in the Army or elsewhere than that at present in active operation in the United States Army.

It includes, among other features, regular medical examinations twice a month; prompt isolation, quarantine, and hospital treatment until cured of all found with infective conditions; court-martial and stoppage of pay; the hearty encouragement of athletic games and sports of all kinds; the furnishing of rational amusements; libraries, opportunity for study and for school; the best of food and clothing; and last, but not least, an earnest appeal to the moral and ethical side is not neglected.

In brief, the Army is controlling its own limited area and is successful within its garrisons and camps. The same measures, or similar ones, adopted by nearby civil communities would be equally effective. Until either the sex instinct is abolished or much altered, or Federal control is invoked as in certain other diseases far less threatening, we may expect that the disability from this cause will continue. In the meantime there should be no relaxing of effort on the part of the Army. The fight will be vigorously continued, with constant hope for increasing assistance and cooperation from the civil communities whose interests are quite as vitally concerned as those of the Army.

In connection with the subject, attention is invited to the remarkable report of the Royal Commission on Venereal Diseases, lately published in England, and also particularly to the recent State legislation in Australia, dealing drastically with venereal infections of every character.

ALCOHOLISM.

The admission and noneffective rates for alcoholism in our Army have steadily diminished during the past decade and a half, keeping pace with the general public sentiment and decreased use of stimulents of this character among all classes in all walks of life in this country.

The Army has banished alcohol from its garrisons and camps and the Navy has eliminated it from its ships and yards. All this before the outbreak of the great war, the struggle which, if it proves nothing else, has demonstrated long since, by the similar action of the various nations engaged, that alcohol and military efficiency have nothing in common and must hereafter be held unqualifiedly antagonistic.

LEGISLATION.

As a result of legislation reorganizing the Army under the national defense act of 1916, the Medical Department was placed, for the first time in its history, upon a satisfactory basis. This is especially true of the commissioned personnel.

The Medical Corps was reorganized upon a basis of seven medical officers to each one thousand of the enlisted strength of the Army, the increase to take place in five annual increments. This increase will add 1,107 officers to the Medical Corps of the Army, raising the total from 443 to 1,550. The ratios in the various grades remain as provided by law in the act of April 23, 1908:

	Per cent.
Colonels.....	3.16
Lieutenant colonels.....	5.42
Majors.....	23.70
Captains and lieutenants.....	67.72

The Dental Corps was reorganized and the probationary contract system abolished. Dental surgeons are now commissioned as first lieutenants and after eight years' service promoted to captains. It is further provided that after 24 years' service, not to exceed 15 dental surgeons may be promoted to the rank of major.

The Veterinary Corps was established and becomes an integral part of the Medical Department. Appointments are made to the Veterinary Corps as assistant veterinarians with the rank of second lieutenant. After five years' service they are promoted to first lieutenant. The law provides that after 15 years veterinarians attain the rank of captain and after 20 years' service the rank of major.

A very important provision is made in the national defense act of 1916 for the assignment of not to exceed five officers of the Medical Department of the Army for duty with the military relief department of the National Red Cross, and also permits the erection of storehouses on military reservations for the use of the Red Cross and the use of Government buildings for the storage of their medical supplies.

Col. Jefferson R. Kean, Medical Corps, distinguished as a sanitarian and executive, becomes the first director general of military relief of the Red Cross, and has already utilized his extended experience to the very great advantage of both the Red Cross and the Army.

ARMY MEDICAL SCHOOL.

The Army Medical School, located at Washington, D. C., has had an unusually successful year.

Col. William H. Arthur, Medical Corps, is the present head of the school and has been its commandant since October, 1915. Associated under his direction, the staff of professors and assistant professors and special lecturers have given a valuable course of instruction to the student class, consisting of officers of the Medical Reserve Corps, who were candidates for appointment in the Medical Corps, medical officers of the Army and National Guard, and enlisted men of the Medical Department who were ordered to the school for special instruction.

The course has covered a wide range of subjects relating to medico-military science, the instruction being both theoretical and practical.

The laboratories of the school have produced all the vaccines used in the United States Army and in the National Guard, and have likewise furnished the antityphoid vaccine for the United States Navy.

The importance of this school to the military service can hardly be overestimated, and it is recommended that steps be taken looking to the securing by the Government of a suitable modern building specially designed for the Army Medical School. Heretofore its activities have been handicapped by crowded or imperfectly arranged rented buildings, and while the present quarters, recently occupied, are much better adapted to the purposes of the school than any of its former homes, yet they are far from ideal either in location or arrangement and leave much to be desired.

The Government should provide the Army Medical School with a permanent and modern home of its own.

LIBRARY OF THE SURGEON GENERAL.

It is desired at this time to call attention to the remarkable development during the past half century of this important adjunct of the Medical Department of the Army, and particularly to the great present need of a modern fireproof building for the proper housing of these valuable collections.

The Surgeon General's library began as a small collection of medical books in the office of Surg. Gen. Lovell in 1835, numbering about 228 volumes in 1840, and increased to about 587 in 1862.

The library in 1865 came first under the master hand of John Shaw Billings, and to this able medical officer and distinguished bibliographer must be given the greatest credit for several unique features in connection with its development. In 1889 the collection consisted of about 1,000 volumes. In 1895 it had grown, under the administration of Capt. Billings, to 300,000 portraits, books, and pamphlets. During this period the librarian conceived and promptly initiated the ingenious plan of a medical catalogue, indexed for author and subject, that should embrace not only monographs and standard works but the reports of individual cases upon which so many conclusions of medical science depend.

From this beginning has developed the universal catalogue of medical literature, The Index Catalogue, the first volume of which was

issued in 1880 and consisted of 880 quarto pages. Since that date at least one such issue has been made annually by him and his able successors; Billings himself having edited the entire first 16 volumes, which ran through the alphabet.

This index, requiring great technical knowledge, infallible arrangement, and unceasing industry, has been kept fully up to date and to the latest professional advances, and, making its way over the earth wherever medical science is known, has brought great credit to the Army, fame to its designer and compilers, and has received the high commendation of the whole world—praise not given to mediocre work.

The present librarian, Lieut. Col. Champ C. McCulloch, jr., in his annual report to this office, makes certain recommendations which are concurred in.

The Surgeon General's library on June 30, 1916, contained 563,238 bound volumes, theses, journals, transactions, unbound volumes and pamphlets, constituting the largest collection of medical literature in the world.

ARMY MEDICAL MUSEUM.

The Army Medical Museum was begun under the direction of Surg. Gen. William A. Hammond, United States Army, in 1862. It began very modestly, as all the great collections have, but with the passing years and under the skilled direction of many capable and devoted hands, it has grown into one of the largest, most instructive, and valuable museums in existence.

It consists now of approximately 47,000 specimens: Pathological, anatomical, comparative anatomy, microscopical, and miscellaneous, and about 15,000 photographs and negatives. About 8,000 specimens have been donated or exchanged with other institutions.

MEDICO-MILITARY OBSERVERS OF EUROPEAN WAR.

The Medical Department has had six representatives with the armies of the countries now at war. These officers of the Medical Corps are Lieut. Col. Alfred E. Bradley, Majors Joseph H. Ford, James Robb Church, Clyde S. Ford, and William J. L. Lyster, and Capt. Perry L. Boyer.

Maj. Joseph H. Ford spent approximately 13 months with the Austro-Hungarian armies on the eastern front, his detail extending from September 26, 1914, to October, 1915. His reports received in this office have covered a wide range and are most comprehensive and valuable.

Maj. James Robb Church, who has been present with the French Army on the western front since January 28, 1916, has already forwarded much information of value in his reports on the medico-military conditions coming under his notice.

Col. Bradley, Maj. Clyde S. Ford, and Maj. William J. L. Lyster were officially detailed by the War Department as observers with the British forces in May, 1916, and are now actively engaged with their duties in the field. Their arrival in Europe was opportune, and the information received indicates that their observations will be of great interest and value professionally and scientifically.

Maj. Perry L. Boyer was in London, England, at the outbreak of the war and departed therefrom September 10, 1914, en route to Paris, France, as an observer with the French armies, being on duty in France until November 25, 1914, when he returned to the United States.

The reports made by the members of the Medical Corps detailed as observers in Europe are of such a character as to warrant, at the proper time, their presentation in an extended form for the information not only of the medical and military student, but for the interest they will have for the general reader.

ARMY NURSE CORPS.

The reports of the work of the Army Nurse Corps have been most gratifying, and a much-needed increase has been authorized for the coming fiscal year. Great care is exercised in the selection of its personnel, with the result that most satisfactory work is being done.

The mobilization of the regular troops and militia having resulted in the establishment of many hospitals on the border, the appointment of 276 nurses was authorized to meet the emergency. At this time there are on duty at the border hospitals:

Base hospitals:

Fort Sam Houston, Tex.....	¹ 54
Fort Bliss, Tex.....	26
Brownsville, Tex.....	20
Eagle Pass, Tex.....	24
Nogales, Ariz.....	16

Camp hospitals:

Deming, N. Mex.....	10
Laredo, Tex.....	10
Douglas, Ariz.....	10
McAllen, Tex.....	12

Total.....	182
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Nurses have been and are being appointed in the regular corps as rapidly as possible to meet the need, and their numbers have been further augmented by the assignment to active duty of a large number from the reserve list, the enrolled nurses of the American Red Cross constituting this reserve.

HOSPITAL TRAIN.

A hospital train, designed in the office of the Surgeon General and consisting of 10 Pullman cars built in the Pullman car shops at Chicago, has been prepared to meet the needs of the Medical Department and is now in operation. Five of the cars are stripped of berths and regular hospital beds have been installed; two large side doors for loading and unloading stretcher cases are provided; two of the cars are regulation sleepers and equipped with extra fans, call bells, medicine cabinets, linen cabinets, extra water and ice tanks, etc., installed for ambulant cases. One car has a complete operating room. The kitchen car is complete and so designed that it can care for over 200 sick.

¹Includes 7 for assignment to duty on the hospital train.

In addition to the Regular Army personnel there will be nurses from the Army Nurse Corps to act as ward nurses in certain cars, diet nurses, and two are to be assigned to the operating car.

The train is painted maroon, with the insignia of the Army Medical Department, and with the train number and car number on each car.

This train will operate between the Mexican border, the west coast, Hot Springs, and the East. Such additional trains as may be necessary to meet the needs of the service will be provided, including a completely equipped bath and disinfecting train for use, if needed, on the border in connection with any possible appearance of typhus fever among troops.

EXPEDITION INTO MEXICO.

In March, 1916, an expeditionary force, consisting of United States troops of all branches, crossed the Rio Grande and entered northern Mexico. This force during most of the time has consisted of from 8,000 to 12,000 men (a monthly average of about 10,000). During an experience covering several months of arduous service under the most trying climatic and insanitary conditions this 10,000 has maintained a remarkable record of health and efficiency.

Its noneffective rates compare favorably with the best of the home troops under garrison conditions. The work of the medical officers and the sanitary personnel has been the subject of special commendatory reports by the commanding general of the expedition.

MOBILIZATION OF THE NATIONAL GUARD.

Under the provisions of the national-defense act of June 3, 1916, the State troops of the country were called into the Federal service in June, 1916, by an order of the President.

The National Guard of the United States, comprising a force consisting of approximately 135,000 officers and enlisted men of various branches, was rapidly mobilized in their respective State camps. Here they were subjected to a rigid physical examination, when time allowed, conforming to that required in the regular service; inspected, mustered, and equipped under the direct supervision of officers of the United States Army specially detailed for that duty. As rapidly as possible these soldiers from civil life were transferred to the large concentration and training camps in the Southern Department and stationed in close proximity to the troops of the Regular Army, some 40,000 of which had been occupying the border district adjacent to the Rio Grande for several years. This sudden and rapid movement of a large body of partially trained or quite inexperienced troops threw an enormous amount of work and responsibility on those charged with its execution, and particularly upon the staff and supply departments of the Army.

To the officers of the Medical Corps of the Army was given the task of making the physical examinations and administering the vaccination against typhoid fever and smallpox, immediately compulsory on entering the Federal service under the existing regulations. Their assignment to the different camps as sanitary inspectors and instructors added further to their important duties.

It can be fairly stated that this mobilization has been accomplished with promptness and with the minimum of disease and discomfort.

In view of the general situation and the suddenness of the call there is little ground for complaint of any kind, and particularly from the standpoint of hygiene and sanitation. A comparison with a somewhat similar mobilization of citizen soldiers in the summer of 1898 and its results shows clearly the advance that has been made in the knowledge of preventive medicine and camp sanitation in the Army since the days of the Spanish-American War.

From the weekly telegraphic reports of "sick and wounded" for the combined forces on the southern border the sick rate since mobilization has been less than 2 per cent, which, expressed in terms of noneffectiveness, is equivalent to a rate of 18.13 per thousand.

The mobilization of the National Guard in 1916 offered a unique and valuable opportunity for instruction to the members of both the National Guard and the Regular Army. The medical officers of both branches have rendered excellent service, and the exceptionally low sick rates that have prevailed during the first few months in the combined camps of the border speak in the highest praise of their ability and efficiency.

HEALTH OF THE ARMY.

INTERNATIONAL NOMENCLATURE.

The diagnostic terms for diseases and injuries, adopted by the Medical Department in accordance with the International Nomenclature, are used with the international numbers for the fourth year in this report.

The International Nomenclature is used by most of the important foreign countries. It is also used by the Census Bureau in this country and by an increasing number of boards of health and large hospitals.

In studying statistics for other countries where the terms used are expressed in a foreign language, the international number furnishes a ready key for their interpretation.

Following Table No. 81 will be found the 10 tables giving the military statistics for the year 1915, as agreed upon at the International Commission for the Unification of the Medical Statistics of Armies, held at Budapest in 1894, at Madrid in 1903, and modified by the last meeting held at Berlin in 1907. The diagnostic terms and numbers used in these tables are those agreed upon by the commission, and are not to be confused with the terms and numbers of the international nomenclature used in the remainder of this report and based upon the second decennial revision by the international commission held in Paris, July 1 to 3, 1909.

As in 1912, 1913, and 1914, only original admissions are used in compiling the statistics in this report. In the years 1904 to 1911, inclusive (reports 1905-1912), the readmissions were counted as admissions. In this report in making comparisons between cases and admissions, the terms case admission (reports 1913-1916, inclusive, and prior to the one for 1905) and total admission (reports 1905-1912, inclusive), will be used.

ADMISSION RATES.

Table No. 81 shows the total admission and case admission rates for American troops of the Army, for the United States, continental (exclusive of Alaska), and for American troops in the Philippine Islands, for diseases, external causes, and all causes separately for each year 1904 to 1911, inclusive.

Table No. 68½ gives the rates per 1,000 for the entire Army. So much interest has been shown concerning the incidence of certain diseases, especially tuberculosis, typhoid fever, and venereal diseases, for the entire Army—that is, for all officers and enlisted men, both American and native troops—that it was deemed advisable to publish this data to include all troops together. The rates for American troops, enlisted men, placed in comparison for ready reference, may be found in Tables Nos. 69 and 76.

OFFICERS.

The mean strength of officers was 4,394, as obtained from the reports of sick and wounded of the Medical Department, and 4,873, from the office of The Adjutant General. There were 2,430 admissions, 18 deaths, and 103.58 constantly noneffective from all causes, equal to ratios of 553.03, 3.69, and 23.57 as compared with ratios of 495.76, 4.76, and 23.12 per 1,000 for the year 1914. The constantly noneffective rate was higher than for 1914; the admission also was higher.

The chief causes of admission and their rates were: Influenza, 60.54; bronchitis, 42.33; diarrhea and enteritis, 39.14; diseases of the pharynx, 31.63; diseases of the nasal fossae, 29.59, and dengue, 20.94.

OFFICERS RETIRED.

Eighteen officers were retired on account of disability during the year, making a rate for retirement for disability of 3.69 per 1,000 as compared with 6.22 per 1,000 for 1914. The discharge rate for disability in enlisted men (all) was 14.06, as compared with 12.78 per 1,000 for 1914.

The following table shows the principal causes for which retirements were made and the rank and age of the officers retired:

TABLE NO. 1.—Retirement of officers, United States Army, year 1915, for disability, by causes and rank, grouped by ages.

	Total.		Ages of officers, quinquennial groups.								
	Num-ber.	Ratio per 1,000 of all offi-cers.	24 years and un-der.	25 to 29 years.	30 to 34 years.	35 to 39 years.	40 to 44 years.	45 to 49 years.	50 to 54 years.	55 to 59 years.	60 years and over.
CAUSES OF RETIREMENT.											
Neurasthenia.....	4	0.82	.....	.....	.....	1	.....	1	2	.....	.....
Bright's disease.....	3	.62	.....	.....	.....	.....	1	.....	.....	2	.....
Organic heart disease.....	2	.41	.....	.....	1	.....	.....	.....	.....	1	.....
Fractures, results of.....	2	.41	.....	1	.....	.....	1	.....	.....	.....	.....
Diabetes.....	1	.21	.....	.....	.....	.....	.....	.....	1	.....	.....
Myelitis.....	1	.21	.....	.....	.....	.....	.....	.....	1	.....	.....
Epilepsy.....	1	.21	.....	.....	.....	.....	.....	1	.....	.....	.....
Deafness and otitis media.....	1	.21	.....	.....	.....	.....	.....	.....	.....	1	.....
Pneumonia, results of.....	1	.21	.....	.....	.....	.....	1	.....	.....	.....	.....
Angiocholitis.....	1	.21	.....	.....	.....	.....	1	.....	.....	.....	.....
Flat foot.....	1	.21	.....	.....	.....	1	.....	.....	.....	.....	.....
RANK IN SERVICE.											
Colonel.....	1	.21	.....	.....	.....	.....	.....	.....	.....	1	.....
Lieutenant colonel.....	3	.62	.....	.....	.....	.....	.....	1	2	.....	.....
Major.....	4	.82	.....	.....	.....	.....	.....	1	1	2	.....
Captain.....	8	1.64	.....	.....	1	1	4	.....	1	1	.....
First lieutenant.....	1	.21	.....	.....	.....	1	.....	.....	.....	.....	.....
Second lieutenant.....	1	.21	.....	1	.....	.....	.....	.....	.....	.....	.....
Number of retirements.....	18	3.69	.....	1	1	2	4	2	4	4	.....
Number of officers in service.....	4,873	.....	215	996	891	966	859	487	258	149	53
Ratio per 1,000 of each group.....	.....	.....	.....	1.00	1.12	2.07	4.66	4.11	15.50	26.85	.....

There were 18 deaths, with a rate of 3.69 per 1,000, as compared with 23 deaths, with a rate of 4.76 in 1914.

The following table shows the causes of deaths of officers:

TABLE NO. 2.—Deaths of officers, United States Army, year 1915, by causes and rank, grouped by ages.

	Total.		Ages of officers, quinquennial groups.								
	Num-ber.	Ratio per 1,000 of all offi-cers.	24 years and under.	25 to 29 years.	30 to 34 years.	35 to 39 years.	40 to 44 years.	45 to 49 years.	50 to 54 years.	55 to 59 years.	60 years and over.
CAUSES OF DEATH.											
By crushing (2 by fall of aeroplane, 1 by over- turning auto, 1 by fall from horse in polo game).....	4	0.82	.....	1	2	.....	1	.....	.....	.....	.....
By suicide (2 by gunshot, 1 by hanging).....	3	.62	1	.....	.....	.....	1	1	.....	.....	.....
Organic heart disease (1 valvular, 1 hypertro- phy and dilatation)....	2	.41	.....	.....	1	.....	.....	1	.....	.....	.....
Pneumonia.....	2	.41	.....	.....	.....	2	.....	.....	.....	.....	.....
Pancreas, disease of the..	2	.41	.....	.....	.....	.....	1	.....	.....	1	.....
Septicemia.....	1	.21	.....	.....	.....	.....	.....	.....	.....	.....	1
Carcinoma.....	1	.21	.....	.....	.....	.....	.....	1	.....	.....	.....
Apoplexy, cerebral.....	1	.21	.....	.....	.....	.....	1	.....	.....	.....	.....
Ulcer of stomach.....	1	.21	.....	.....	.....	.....	.....	1	.....	.....	.....
Causes unknown.....	1	.21	.....	1	.....	.....	.....	.....	.....	.....	.....
RANK IN SERVICE.											
Colonel.....	1	.21	.....	.....	.....	.....	.....	.....	.....	.....	1
Lieutenants colonel.....	2	.41	.....	.....	.....	.....	.....	1	.....	1	.....
Majors.....	4	.82	.....	.....	.....	1	.....	3	.....	.....	.....
Captains.....	5	1.03	.....	.....	.....	1	4	.....	.....	.....	.....
First lieutenants.....	4	.82	.....	1	3	.....	.....	.....	.....	.....	.....
Second lieutenants.....	2	.41	1	1	.....	.....	.....	.....	.....	.....	.....
Number of deaths.....	18	3.69	1	2	3	2	4	4	.....	1	1
Number of officers in service.....	4,873	.....	215	996	891	966	859	487	258	149	52
Death rate per 1,000 of each group.....	.....	.....	4.65	2.01	3.37	2.07	4.66	8.21	.....	6.71	19.23

ENLISTED MEN.

The mean enlisted strength of the Army, American troops, white and colored, for the year 1915, as reported on the monthly sick reports of the Medical Department, was 93,262, and on the returns of The Adjutant General's Office, 94,729. The former represents the strength of the commands from which the sick returns were made and was used in calculating all ratios except those for deaths and discharges. As all deaths and discharges were reported, even of those absent from a command, the total strength as obtained from The Adjutant General was used in calculating ratios pertaining to those headings. There was an increase in strength over the year 1914, for which the medical returns showed 87,228 and The Adjutant General's Office, 88,133.

During the year 1915 American troops were stationed in the United States proper, the Philippine Islands, China, Alaska, Hawaii, and the Canal Zone. Native troops served in Porto Rico and the Philippine Islands. Statistics for the native troops, Porto Ricans and the Philippine Scouts, have been separately compiled, and when reference

is made to the "Army" in this report the entire Army—officers, white, colored, and native enlisted men—is meant.

The size of garrisons in the Tropics, which constituted such a large percentage of our military forces, renders of more importance than formerly the general rates for the entire Army.

Charts A, B, C, D, E, F, and G are for the entire Army for the decade 1906–1915. For years prior to 1906 the same data as shown in these charts will be found published in the report for 1912, pages 14, 15, and 16.

Table No. 76 gives American troops, enlisted men by countries, placed in comparison for 1915.

The admission and noneffective rates for the entire Army and for the troops in geographical divisions are readily comparable in the following tabulation:

Admission and noneffective rates for entire Army and for troops in geographical divisions for years 1915 and 1914.

	Army (entire).	Ameri- can troops of the Army (en- listed men).	Enlisted men serving in geographical divisions.							
			United States (at home).	Alaska.	Canal Zone.	Hawaii.	Philippine Islands.		China.	Porto Rico.
							Ameri- can troops.	Native troops.		
Admission rates:										
1915.....	728.19	744.59	704.01	386.63	871.00	568.94	990.45	573.84	1,462.17	555.07
1914.....	660.45	665.83	629.84	422.95	955.22	523.27	877.69	714.14	1,080.23	629.30
Noneffective rates:										
1915.....	25.22	25.88	25.74	8.91	26.00	20.44	29.15	15.68	35.00	22.78
1914.....	23.78	24.02	23.37	10.52	37.30	18.75	30.58	20.30	29.68	22.52

The rates are slightly higher this year for the United States, Hawaii, China, and for the American troops in the Philippine Islands. A decided reduction in admission and noneffective rates occurred in Alaska, Canal Zone, and the Philippine Islands (native troops). The most marked reduction is noted in the admission rate for the Philippine Scouts and in the noneffective rate for the troops serving in Canal Zone.

ADMISSIONS TO SICK REPORT (AMERICAN TROOPS, ENLISTED MEN).

[See Tables Nos. 69 and 76.]

The admissions to sick report during the year 1915 show a slight increase, being 744.59 as compared with 665.83 in 1914. The admission rate for disease only is 610.32; in 1914 it was 539.46. Table No. 81 shows the case admission and total admission rates for all American troops, those in the United States and those in the Philippine Islands, 1904 to 1911, inclusive. The diseases causing the highest admission rates were: Venereal, 107.71; diseases of the pharynx, 65.10; bronchitis, 35.17; influenza, 34.27; and diarrhea and enteritis, 31.51. The rates just given are for the American enlisted men of the Army and are given first for convenience of comparison. For the entire Army (all officers and enlisted men, including native

troops) the rate is 726.19. For disease only the rate is 597.02. The rate for disease this year is slightly higher both among the American troops and for the entire Army. This is probably accounted for by the increased rates for venereal diseases.

For venereal diseases the rate for white troops was 105.81, a decrease over 1914; for colored, 136.30, which was slightly higher than for 1914. The rates in the Philippines for these troops were 177.08 and 258.76, respectively, which are higher for both races over the rates of 1914 in the Philippines, 174.79 and 233.76, respectively. These high rates are undoubtedly due to social conditions and indicate the necessity for a change of conditions before rates comparable to those obtaining in the United States may be expected. As the rate for 1912 for colored troops in the Philippines was 524.06, the highest recorded in the Army, the present rate is an index of the effectiveness of the measures instituted for improvement in this condition.

The case admission rate for external causes, American troops, enlisted men, was 134.27. In 1914 this rate was 126.37, and in 1913, 136.52. The principal causes for this rate were: Traumatism by fall, 36.16; injuries by animals, 12.33; traumatism by cutting or other piercing instruments, 10.57; traumatism by crushing, 6.66; burns, 4.12; and poisoning by food, 3.44.

NONEFFECTIVE RATES.

Chart B shows for the entire Army the constantly noneffective rate for all causes from the year 1906 to 1915, inclusive. This rate is the true measure of nonefficiency of the Army from sickness and injury. The rate for disease and injury obtained for the total American troops, enlisted men, for the year 1915 was 25.88, as compared with 24.02 for 1914 and 24.33 per 1,000 in 1913. The rate for 1914 is the lowest recorded noneffective rate in the history of the Army. The highest noneffective rate on record was for the year 1898, when the total rate was 82.83 per 1,000, and the rate for diseases alone was 69.09.

The noneffective rate for all troops in the military service, or the entire Army, from all causes, was 25.22 (for disease alone, 20.85), which is slightly higher than that for 1914, but still much below the rates for any preceding year, except 1914, when the rate was 23.78. This rate during the past decade shows a steady reduction. In 1906 the noneffective rate was 47.86.

DISCHARGES FOR DISABILITY.

Chart D gives the rates for discharges for disability for the Army from the year 1906 to 1915, inclusive.

Soldiers stationed outside of the territorial limits of the United States are brought to the United States for discharge, except those belonging to the Porto Rican Regiment and the Philippine Scouts. They are, however, credited in the tabulated reports to the country in which the soldiers were serving when they became disabled, if their commands were there at date of discharge.

The present system requires that all soldiers certified by medical officers to be permanently incapacitated for the military service shall be critically examined by a board of two medical officers before being

Chart A.—Army. Officers and American and native troops.
 [Admission rates, all causes, years 1906-1915.]

Years	Rates.	1	2	3	4	5	6	7	8	9	10	11
		0	0	0	0	0	0	0	0	0	0	0
* 1906	1188.											
* 1907	1102.											
* 1908	1079.											
* 1909	964.											
* 1910	870.											
* 1911	858.											
1912	806.											
1913	666.											
1914	660.											
1915	726.											

* Screen of cases deducted to correspond with years preceding 1906, and 1912 to 1915.

Chart B.—Army. Officers and American and native troops.

[Noneffective rates, all causes, years 1906-1915.]

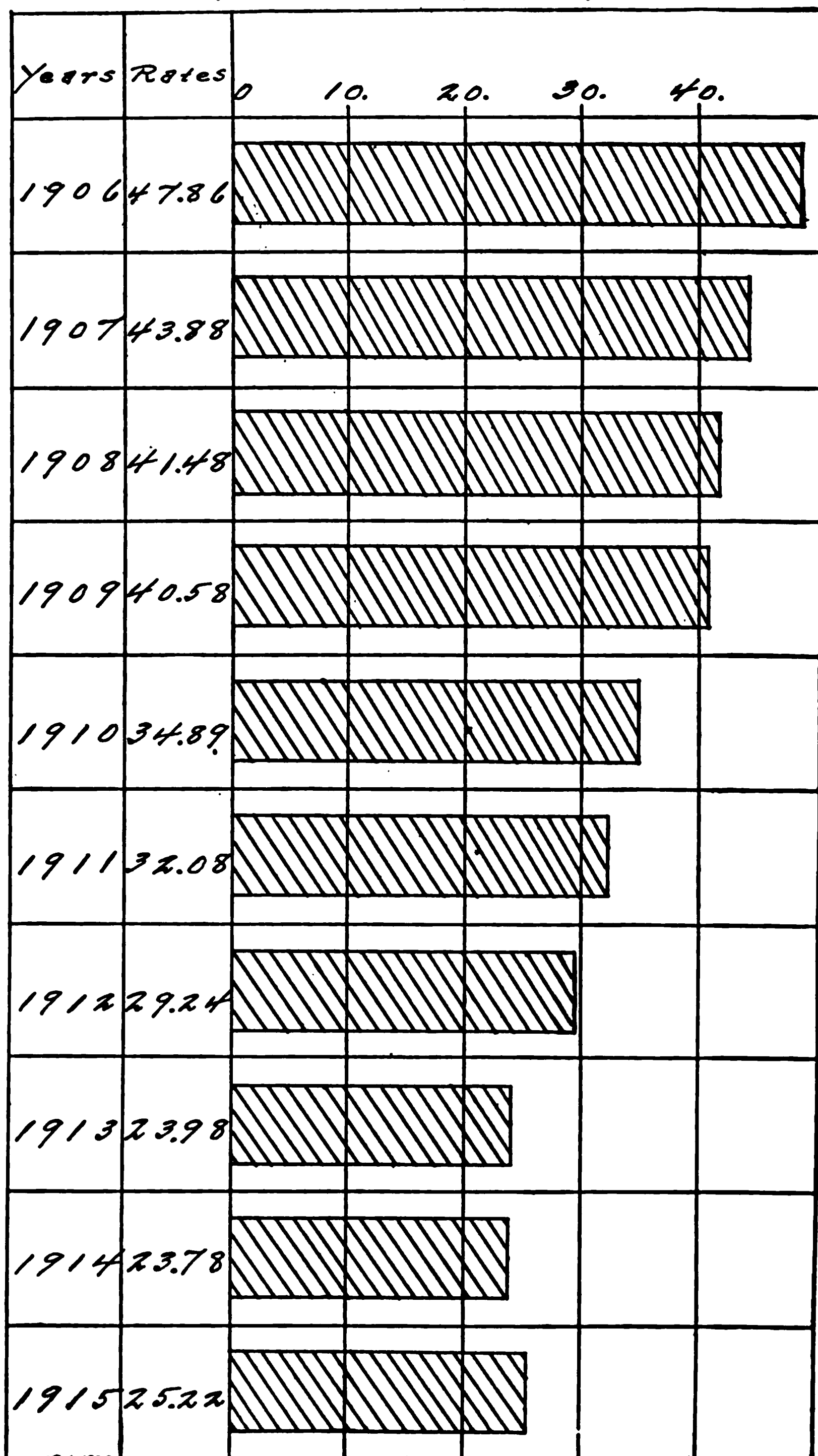
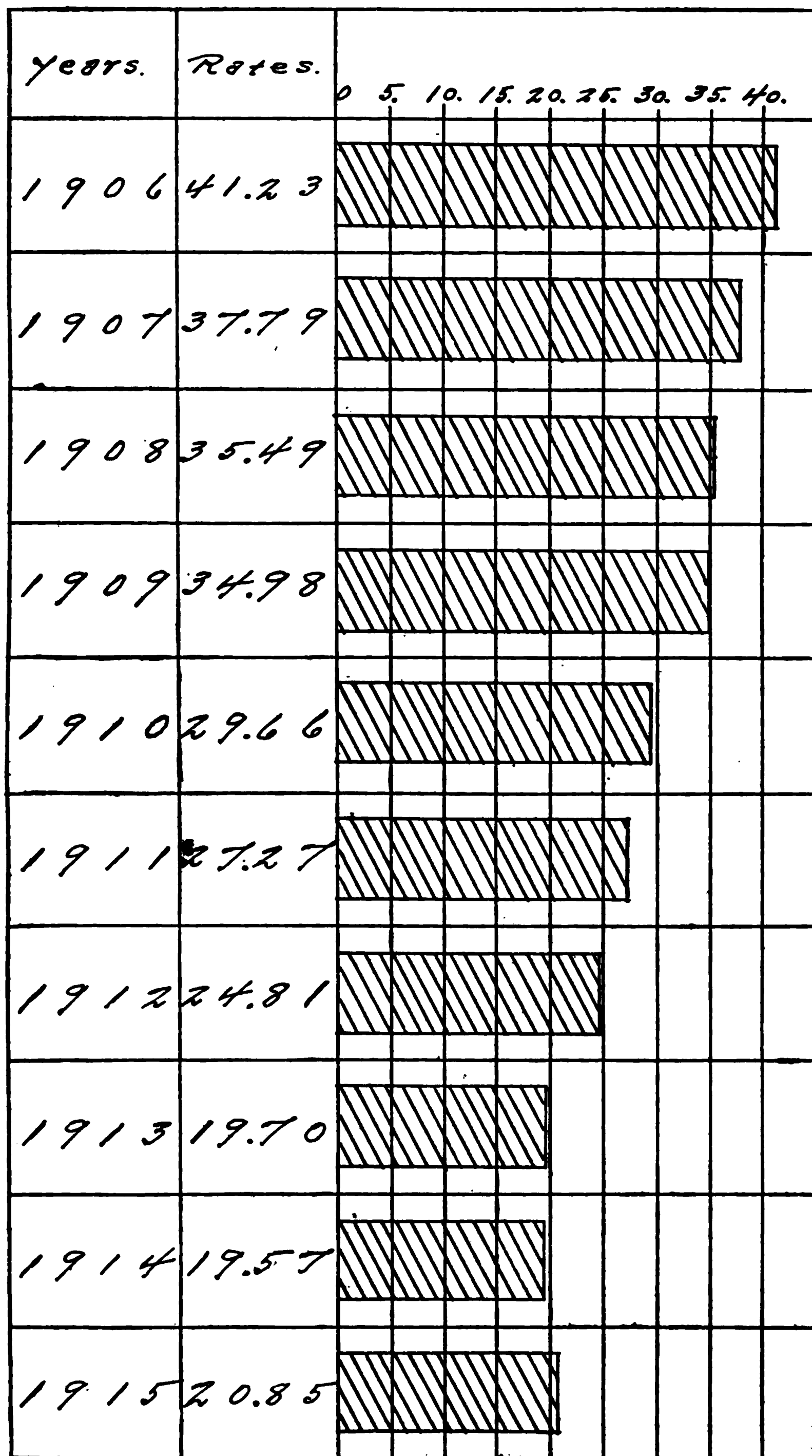


Chart C.—Army. Officers and American and native troops.

[Noneffective rates for disease, years 1906-1915.]



discharged. The reports of these boards go to the department headquarters from where discharges are ordered, except in the cases of soldiers at a recruit depot or general hospital, and the reports of boards on insane patients. In the latter circumstances the reports are sent to the Adjutant General of the Army, who directs the discharge or issues the order when insane are recommended to be transferred to the Government Hospital for the Insane, Washington, D. C.

The discharge rate for 1914 was lower than for any year since the Spanish-American War, being 12.99 as compared with 14.26 for the year 1915. In 1915 there were in the Army 1,351 men, American troops, discharged for disability, as compared with 1,145 during 1914. The corresponding rate for 1913 was 13.24. The rate for 1867 was 13 per 1,000, and the lowest rate from 1894-1898, inclusive, was that for 1895, the lowest on record in the Army, 9.15 per 1,000. The highest rate in any year for discharge for disability was in 1849, when the total rate for discharge was 76.7 per 1,000. The rate for the entire Army was 14.06 per 1,000.

The discharge rate for disease in 1915 (American troops) was 12.79 per 1,000, as compared with 11.39 in 1914, and that for external causes was 1.47 in 1915 as compared with 1.60 in 1914. The diseases causing the highest discharge rate in 1915 were as follows, absolute numbers and rates per 1,000 being given:

Discharges, enlisted men (American troops), year 1915.

Disease.	Number.	Ratio.
Mental alienation.....	313	2.30
Tuberculosis (all).....	170	1.79
Flat foot.....	118	1.25
Venereal disease.....	78	.82
Epilepsy.....	65	.69
Organic heart disease.....	47	.50

DEATHS FROM ALL CAUSES.

Chart E shows the total death rate for all causes for the Army from the year 1906 to 1915, inclusive. (See also Table 3A.)

For American troops, enlisted, the total rate for 1915 was 4.60 as compared with the corresponding rate of 4.45 for 1914 and 4.86 for 1913. The rate for 1915 is but little above the rate for 1914, which was the lowest on record in the Army. The highest death rate occurring in any year was in 1849, when the total rate for deaths was 80.2. The death rate for diseases was 2.60 in 1915; 2.36 in 1914, and 2.57 in 1913. The total number of deaths in 1915 was 436. The following diseases caused the highest number of deaths, absolute numbers and rates per 1,000 being given:

Deaths, enlisted men (American troops), year 1915.

Disease.	Number.	Ratio.
Tuberculosis.....	31	0.23
Pneumonia (lobar).....	29	.31
Organic heart disease.....	23	.28
Measles.....	22	.23
Appendicitis.....	12	.13
Epidemic cerebrospinal meningitis.....	10	.11

The following were the principal causes of deaths, among officers and enlisted men, American troops, from external causes, with the number in each instance: Suicides, 53; homicides, 21; drowning, accidental, 34; traumatism by fall, 9; traumatism by other crushing, 29; traumatism by firearms, 12.

INFLUENCE OF STATION ON TROOPS.

Regarding the comparative healthfulness of the various countries in which American troops were serving during the year (Army transports being excluded), it will be noted that Alaska maintains the lowest admission and noneffective rates, 386.63 and 8.91 per 1,000, respectively; the Canal Zone the lowest death rate, 2.37 per 1,000; China had the lowest discharge rate, 9.74; China also had the highest noneffective rate, 35.00, as well as the highest admission rate, 1,462.17 per 1,000; the Philippine Islands the highest discharge rate, and the United States the highest death rate.

Chart D.—Army. Officers and American and native troops.

[Discharge rates, all causes, years, 1906-1915.]

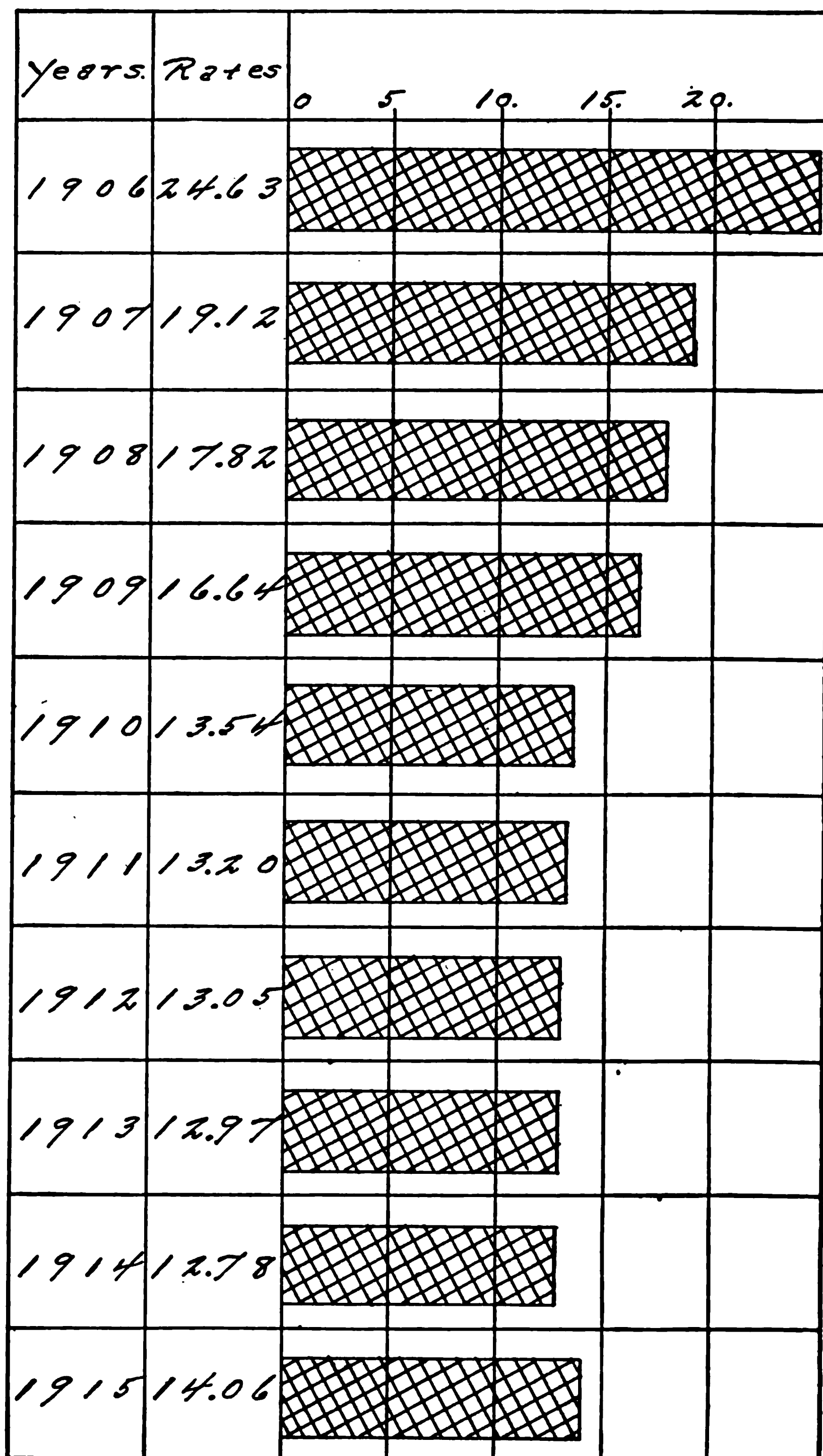


Chart E.—Army. Officers and American and native troops.
[Death rates, all causes, years 1906-1915.]

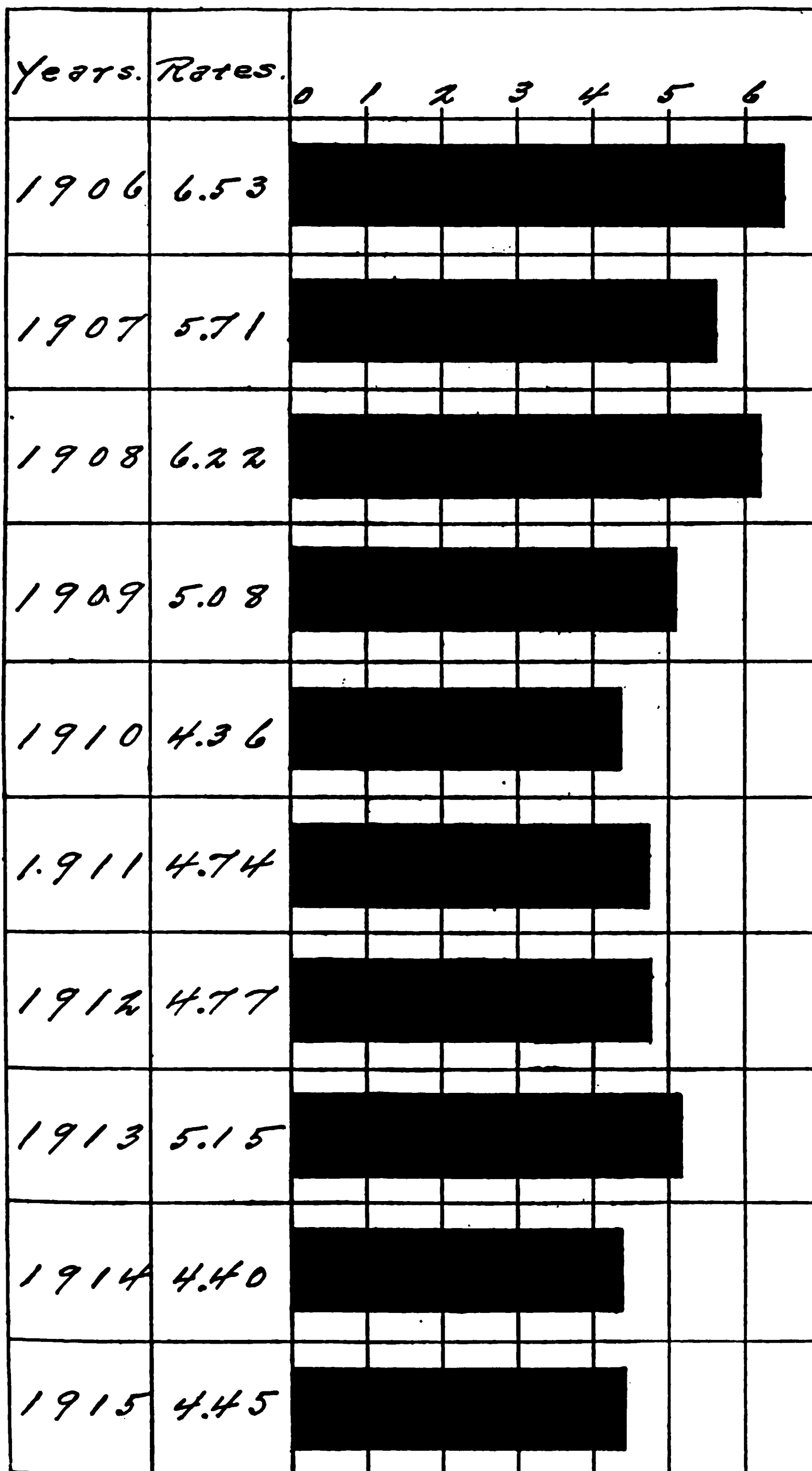


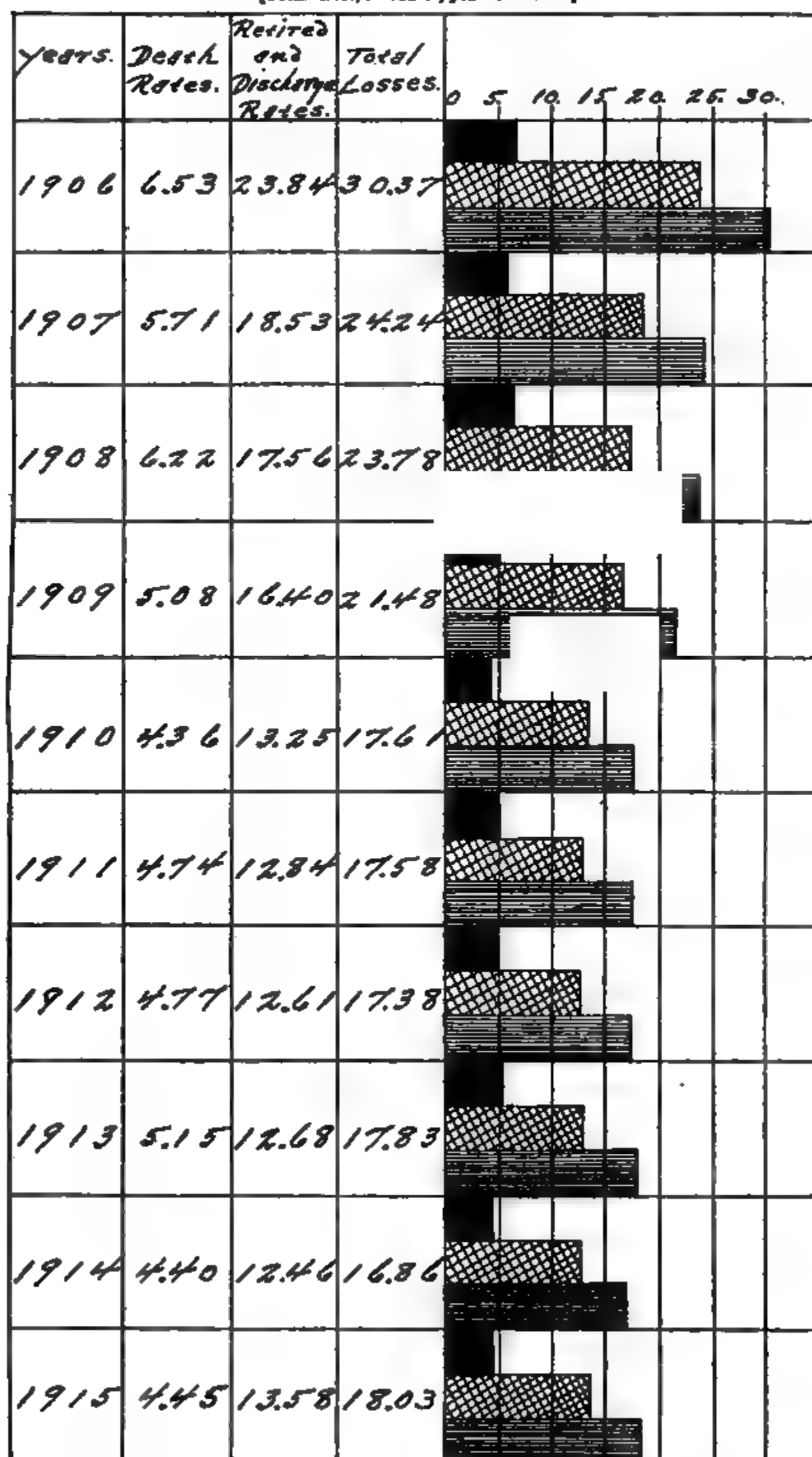
Chart F.—Army. Officers and American and native troops.

[Death, discharge, and noneffective rates for disease, years 1906-1915.]



Chart G.—Army. Officers and American and native troops.

[Total losses, all causes, years 1906-1915.]



Deaths Retired & Discharged Total Losses

*Chart H.—Army. Officers and American and native troops.**(Admission, discharge, death, and noneffective rates for disease, by countries, year 1915.)*

TABLE No. 3.—Numerical view of the effect of disease and injury on United States troops at home and abroad in the year 1915, compared with corresponding data for the year 1914, by countries (enlisted men only).

ABSOLUTE NUMBERS.

American troops (enlisted men).	Mean strength.	Admitted.			Discharged on certificate of disability.			Died.			Total losses.			Noneffective from sickness.	
		Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease.	Injury.	Days treated.	Con-stantly non-effective.
United States.....	63,725	44,863	35,972	8,891	879	771	108	349	193	156	1,228	964	264	598,677	1,040.21
Alaska.....	61,362	38,648	30,609	8,039	917	794	123	298	156	142	1,215	950	265	523,907	1,433.72
Philippine Islands.....	915	295	227	68	9	9	.....	2	1	1	11	10	1	2,482	6.80
China.....	1914	387	288	99	8	7	1	8	3	5	16	10	6	3,515	9.63
Hawaii.....	11,834	11,721	10,308	1,413	276	262	14	34	18	16	310	280	30	125,910	344.96
Canal Zone.....	10,253	8,999	7,655	1,344	112	108	4	40	21	19	152	129	23	114,455	313.53
Army transports.....	1,335	1,952	1,802	150	13	12	1	6	4	2	19	16	3	17,054	46.72
.....	1,047	1,131	1,012	119	4	4	.....	6	5	1	10	9	1	11,344	31.08
.....	8,572	4,877	3,779	1,098	97	87	10	27	20	7	124	107	17	63,939	175.17
.....	7,971	4,171	3,204	967	72	63	9	13	9	4	85	72	13	54,544	149.44
.....	5,721	4,983	4,114	869	77	71	6	14	7	7	91	78	13	54,290	148.74
.....	2,010	1,920	1,678	242	23	19	4	7	1	6	30	20	10	27,367	74.98
.....	1,312	751	718	33	.....	.....	.....	4	3	1	4	3	1	18,471	50.61
.....	1,404	681	656	25	1	1	.....	6	6	.....	7	7	.....	13,761	37.70
Total.....	93,262	69,442	56,920	12,522	1,351	1,212	139	436	246	190	1,787	1,458	329	880,823	2,413.21
Regular Army, American troops from 1905 to 1914.....	87,228	58,079	47,056	11,023	1,145	1,004	141	392	208	184	1,537	1,212	325	764,883	2,095.57
Porto Rican troops.....	69,741	680,899	554,775	126,124	11,926	10,669	1,257	3,667	2,025	1,642	15,593	12,694	2,899	9,261,927	2,536.12
Philippine Scouts.....	681	378	340	38	5	5	.....	3	2	1	8	7	1	5,662	15.51
.....	669	421	367	54	6	6	.....	3	.....	3	9	6	3	5,499	15.07
.....	5,505	3,159	2,657	502	63	53	5	14	9	5	77	67	10	31,506	86.31
.....	5,020	3,585	3,104	491	43	41	4	16	11	5	64	55	9	37,189	101.89

TABLE No. 3.—Numerical view of the effect of disease and injury on United States troops at home and abroad in the year 1915, compared with corresponding data for the year 1914, by countries (enlisted men only)—Continued.

PROPORTIONATE NUMBERS (ENLISTED MEN ONLY).

[Ratio per 1,000 of mean strength.]

American troops (enlisted men.)	Mean strength.	Admitted.			Discharged on certificate of disability.			Died.			Total losses.			Con-stantly non-effective.	Days treated.	
		Total.	Disease.	Injury.	Total.	Dis-ease.	Injury.	Total.	Dis-ease.	Injury.	Each soldier.	Each case.				
United States.....	68,725	704.01	564.49	139.52	13.60	11.93	1.67	5.40	2.99	2.41	19.00	14.92	4.08	25.74	9.39	13.34
Alaska.....	61,362	629.84	498.83	131.01	14.82	12.83	1.99	4.82	2.52	2.30	19.64	15.35	4.29	23.37	8.53	13.54
Philippine Islands.....	11,834	386.63	297.51	89.12	11.80	11.80	.....	2.62	1.31	1.31	14.42	13.11	1.31	8.91	3.25	8.41
China.....	10,263	422.95	314.75	108.20	8.74	7.65	1.09	8.74	3.28	5.46	17.48	10.93	6.55	10.52	3.84	9.08
Hawaii.....	1,335	990.45	871.05	119.40	23.22	22.04	1.18	2.86	1.51	1.35	26.08	23.55	2.53	29.15	10.64	10.74
Canal Zone.....	1,047	877.69	746.61	131.08	10.62	10.24	.38	3.79	1.99	1.80	14.41	12.23	2.18	30.58	11.15	12.72
Army transports.....	1,312	1,462.17	1,349.81	112.36	9.74	8.99	.75	4.49	3.00	1.50	14.23	11.99	2.25	35.00	12.77	8.74
	1,404	1,080.23	966.57	113.66	3.82	3.82	.....	5.73	4.78	.96	9.55	8.60	.96	29.68	10.83	10.03
	8,572	568.94	440.85	128.09	10.92	9.79	1.13	3.04	2.25	.79	13.96	12.04	1.92	20.44	7.46	13.11
	7,971	523.27	401.96	121.31	9.02	7.89	1.13	1.63	1.13	.50	10.65	9.02	1.63	18.75	6.84	13.08
	5,721	871.00	719.10	151.90	13.03	12.01	1.02	2.37	1.18	1.18	15.40	13.19	2.20	26.00	9.49	10.89
	2,010	955.22	834.83	120.40	10.94	9.04	1.90	3.33	.48	2.85	14.27	9.52	4.75	37.30	13.62	14.25
	1,312	572.41	547.26	25.15	.....	.....	.....	3.05	2.29	.76	3.05	2.29	.76	38.57	14.08	24.59
	1,404	485.04	467.24	17.81	.71	.71	.....	4.27	4.27	.....	4.98	4.98	.....	26.85	9.80	20.21
Total.....	98,262	744.50	610.32	134.27	14.26	12.79	1.47	4.60	2.60	2.01	18.86	15.39	3.48	25.88	9.44	12.68
Regular Army, American troops from 1905 to 1914.....	87,228	665.83	539.46	126.37	12.99	11.39	1.60	4.45	2.36	2.09	17.44	13.75	3.69	24.02	8.77	13.17
Porto Rican troops.....	69,741	976.32	793.47	180.85	16.81	15.04	1.77	5.17	2.85	2.32	21.98	17.89	4.09	36.36	13.23	13.60
Philippine Scouts.....	681	555.07	499.27	55.80	7.34	7.34	.....	4.41	2.94	1.47	11.75	10.28	1.47	22.78	8.31	14.98
	609	629.30	543.58	80.72	8.97	8.97	.....	4.48	.....	4.48	13.45	8.97	4.48	22.52	8.22	13.06
	5,505	573.84	482.65	91.19	11.44	10.53	.91	2.54	1.63	.91	13.98	12.16	1.82	15.68	5.72	9.97
	5,020	714.14	618.33	95.82	9.56	8.76	.80	3.19	2.19	1.00	12.75	10.95	1.80	20.30	7.41	10.37

TABLE No. 3A.—Numerical view of the effect of disease and injury on the Army, serving at home and abroad, in the year 1915, compared with corresponding data for the year 1914, by countries (officers and enlisted men, Porto Ricans and Philippine Scouts).

PROPORTIONATE NUMBERS (ENTIRE ARMY).

[Ratios per 1,000 of mean strength.]

The Army, officers and enlisted men, including Porto Ricans and Philippine Scouts.	Mean strength.	Admitted.			Discharged on certificate of disability.			Died.			Total losses.			Noneffective from sickness.		
		Total.	Disease.	Injury.	Total.	Dis-ease.	Injury.	Total.	Dis-ease.	Injury.	Total.	Dis-ease.	Injury.	Con-stantly non-effect-ive.	Days treated.	
															Each soldier.	Each case.
United States.....	1915	666.04	559.43	136.61	13.60	11.93	1.67	5.30	2.95	2.35	18.90	14.88	4.02	25.77	9.41	12.51
Alaska.....	1914	622.28	493.90	128.38	14.82	12.83	1.99	4.87	2.56	2.31	19.69	15.39	4.30	23.41	8.54	13.73
Philippine Islands.....	1915	378.65	292.24	86.40	11.80	11.80	.....	2.54	1.27	1.27	14.34	13.07	1.27	8.71	3.18	8.40
China.....	1914	408.14	303.76	104.38	8.74	7.65	1.09	8.35	3.13	5.22	17.09	10.78	6.31	10.17	3.71	9.09
Hawaii.....	1915	853.65	743.46	110.19	19.49	18.40	1.09	2.77	1.61	1.16	22.26	20.01	2.26	24.72	9.02	10.57
Canal Zone.....	1914	818.04	699.36	118.67	10.28	9.76	.51	3.50	2.03	1.47	13.78	11.79	1.98	27.20	9.93	12.14
Porto Ricans.....	1915	1,438.32	1,328.74	109.58	9.74	8.99	.75	4.35	2.90	1.45	14.09	11.89	2.20	34.45	12.57	8.74
The Army.....	1914	1,063.24	949.53	113.66	3.82	3.82	.....	5.50	4.53	.92	9.32	8.40	.92	28.88	10.54	9.92
United States.....	1915	568.50	441.30	127.20	10.92	9.79	1.13	3.26	2.17	1.09	14.18	11.96	2.22	20.24	7.39	12.99
Alaska.....	1914	523.68	402.39	121.29	9.02	7.89	1.13	1.81	1.21	.60	10.83	9.10	1.73	18.09	6.82	13.03
Philippine Islands.....	1915	859.22	709.81	149.41	13.03	12.01	1.02	2.46	1.31	1.15	15.49	13.32	2.17	25.63	9.35	10.89
China.....	1914	938.35	818.88	119.46	10.94	9.04	1.90	3.21	.46	2.75	14.15	9.50	4.65	36.45	13.30	14.18
Hawaii.....	1915	552.16	496.52	55.63	7.34	7.34	.....	4.17	2.78	1.39	11.51	10.12	1.39	22.36	8.16	14.78
Canal Zone.....	1914	615.28	534.65	80.62	8.97	8.97	.....	4.24	.....	4.24	13.21	8.97	4.24	21.64	7.90	12.84
Porto Ricans.....	1915	545.85	520.58	25.27	.....	.....	.....	2.89	.....	.72	2.89	2.17	.72	36.32	13.49	24.71
The Army.....	1914	465.45	448.51	16.94	.....	.....	.....	4.07	2.17	.....	4.78	4.78	.....	26.47	9.66	20.76
United States.....	1915	726.19	597.02	129.16	14.06	12.63	1.43	4.45	2.53	1.92	18.51	15.16	3.35	25.22	9.20	12.67
Alaska.....	1914	660.45	538.09	122.36	12.78	11.23	1.55	4.40	2.35	2.05	17.18	13.68	3.60	23.78	8.68	13.14

INFLUENCE OF ARMS OF SERVICE.

The admission rate for disease was highest for the Field Artillery, being 764.57, while the Ordnance Corps had the lowest, 426.21 per 1,000.

The death rate was highest in the Ordnance Corps, 6.78, and lowest in the Field Artillery, 1.79; the Hospital Corps being next with 2.02 per 1,000.

TABLE NO. 4.—Influence of disease on enlisted American troops of the Army, by arms of service, for the year 1915.

	Mean strength.	Admitted.	Discharged on certificate of disability.	Died.	Constantly non-effective.	Ratio per 1,000 of mean strength.			
						Admitted.	Discharged on certificate of disability.	Died.	Constantly non-effective.
Infantry.....	34,090	22,535	461	75	781.50	661.04	13.31	2.17	22.98
Cavalry.....	14,408	8,361	149	30	284.04	580.30	10.18	2.05	19.72
Coast Artillery.....	18,963	10,194	273	49	382.31	537.57	14.17	2.54	20.16
Field Artillery.....	5,509	4,212	76	10	133.28	764.57	13.60	1.79	24.19
Engineers.....	1,877	1,282	21	7	57.58	683.00	11.01	2.67	30.68
Ordnance.....	725	309	1	5	9.69	426.21	1.36	6.78	13.87
Signal Corps.....	1,364	594	10	5	23.83	435.48	7.21	2.61	17.47
Hospital Corps.....	3,891	2,135	59	8	74.77	548.70	14.93	2.02	19.22
Others.....	12,435	7,298	162	57	245.73	586.89	12.83	4.51	19.76
Total.....	93,262	56,920	1,212	246	1,992.74	610.32	12.79	2.60	21.37

The following table shows the relative frequency of the occurrence of the more important diseases for the various arms of service; figure 1 indicating the highest ratio and figure 8 the lowest in each case for each arm:

TABLE NO. 5.—Relative frequency of occurrence of certain important diseases, by arms of service, in the Army, among American troops, enlisted men, year 1915.

Arms of service.	Most important diseases.										
	Venereal.	Tonsillitis and pharyngitis.	Diarrhea and enteritis.	Malaria.	Bronchitis.	Alcoholism.	Rheumatism (articular).	Dysentery.	Tuberculosis.	Typhoid fever.	Pneumonia (lobar).
Infantry.....	1	2	4	3	2	6	3	7	4	2	5
Cavalry.....	4	3	3	3	3	7	3	4	7	1	1
Coast Artillery.....	3	4	3	3	4	3	2	3	3	.....	4
Field Artillery.....	3	1	1	2	1	3	7	3	3	.....	4
Engineers.....	3	6	2	1	3	3	3	3	2	.....	3
Ordnance.....	3	8	7	3	3	4	4	1	3	.....	3
Signal Corps.....	5	7	6	7	3	2	3	3	3	.....	.....
Hospital Corps.....	7	5	5	4	7	1	1	2	1	.....	7

Chart I.—United States and Philippine Islands. Officers and American and native troops.

[Non-effective rates for special diseases, year 1915.]

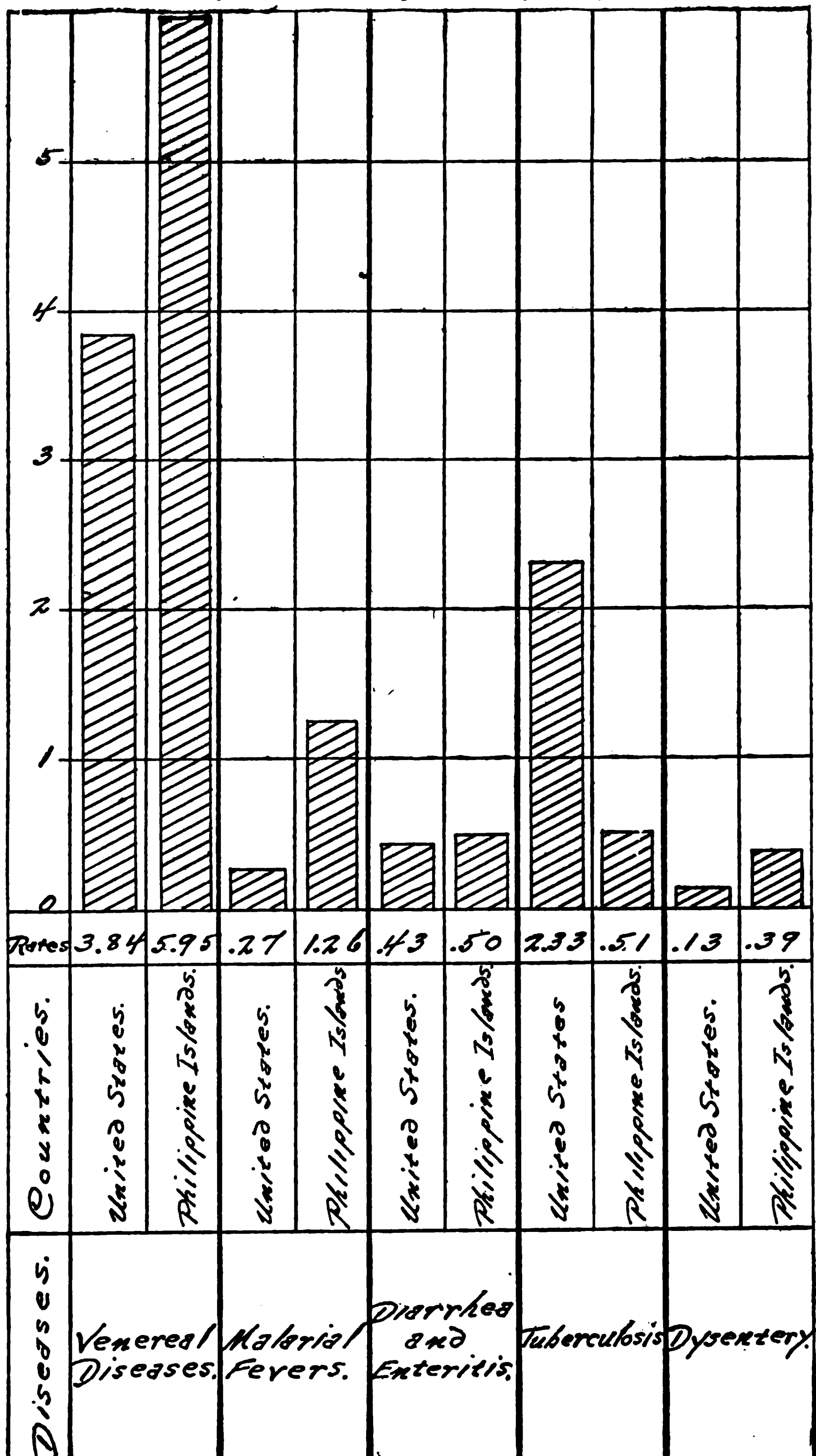


Chart F.—Army. Officers and American and native troops.
[Admission rates for malarial fevers, years 1906-1915.]

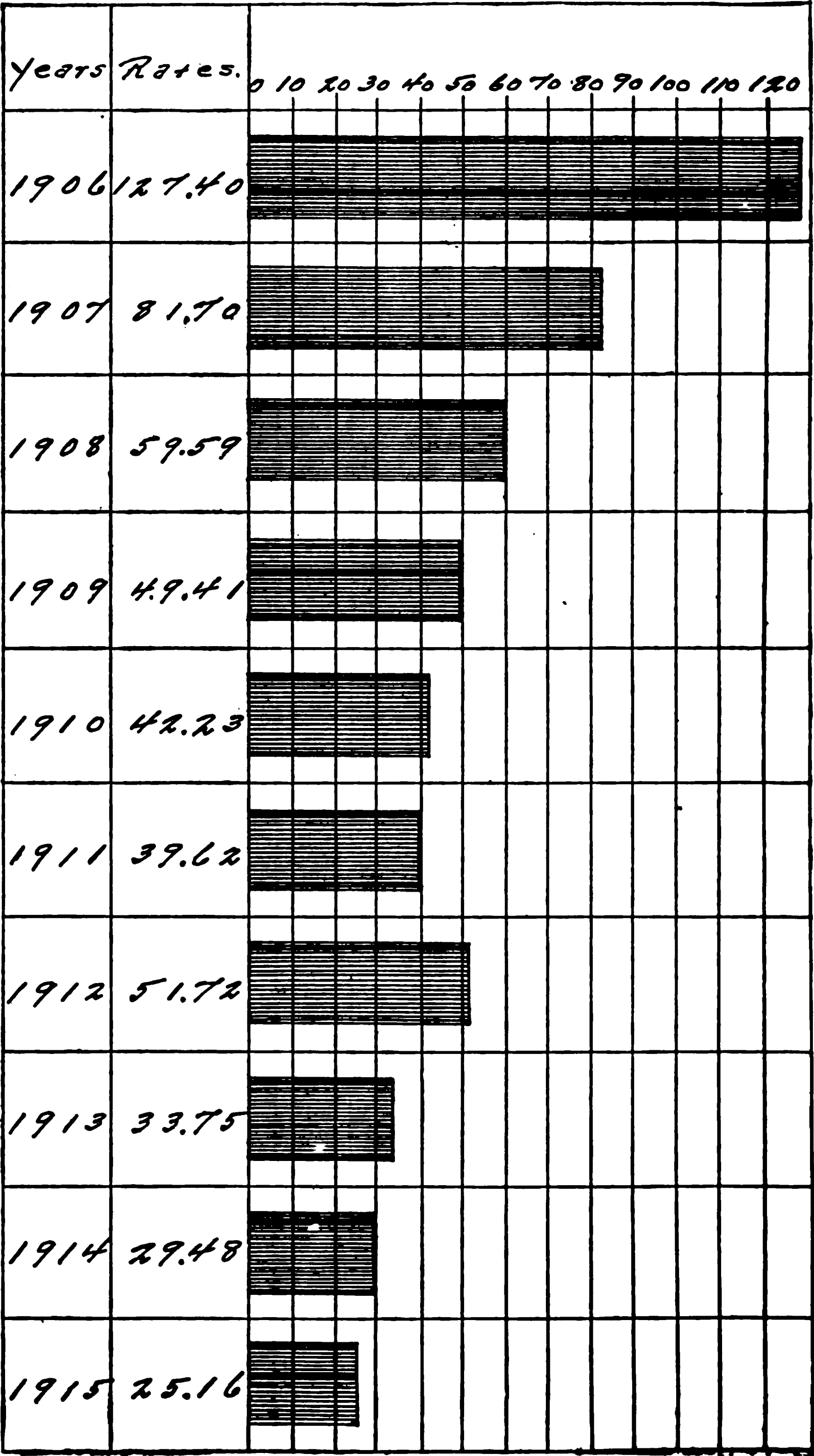


Chart K.—Army. Officers and American and native troops.

[Noneffective rates for malarial fevers, years 1906-1915.]

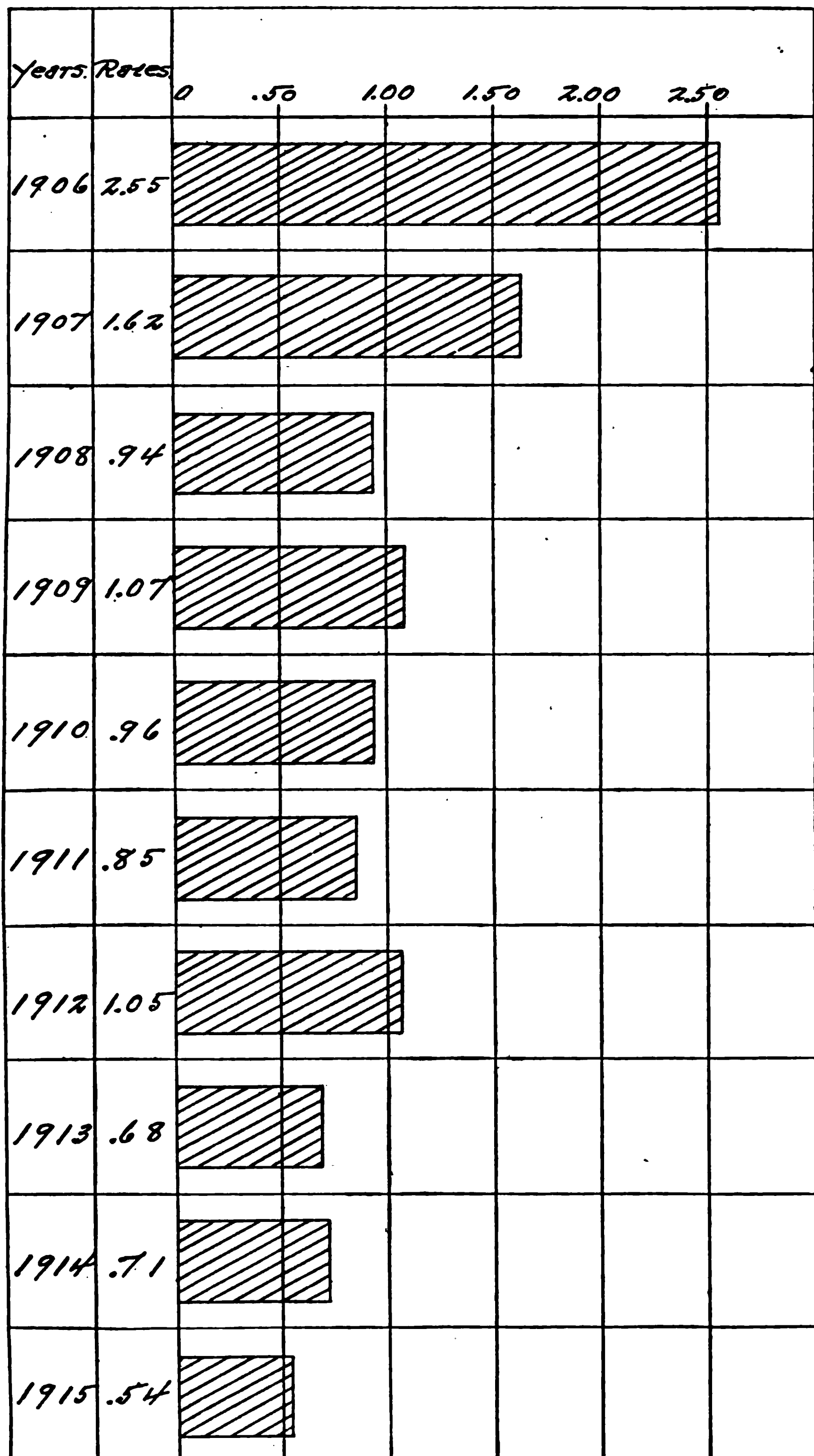
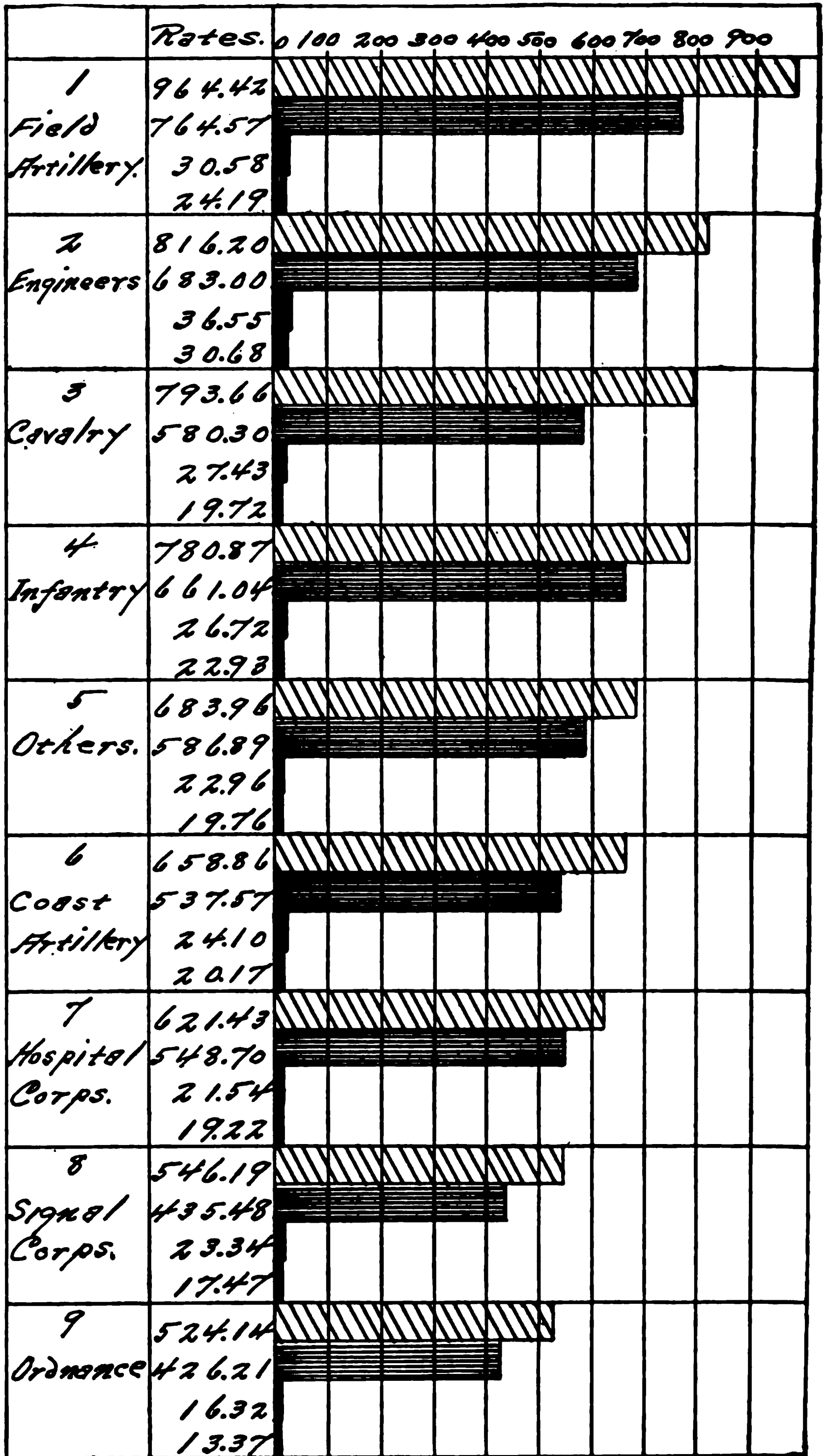


Chart L.—Army. Total American enlisted men.

[Admission and noneffective rates, all causes and disease, by arms of service, year 1915.]



Admissions, Total.



Noneffective, Total.



Admissions, Disease.



Noneffective, Disease.



The following tabulation exhibits the admission and noneffective rates for the different races for the principal diseases causing the greatest nonefficiency:

Diseases causing the greatest amount of nonefficiency in the Army, arranged in accordance therewith, together with their admission rates, in ratios per 1,000 of mean strength.

	Army, total enlisted.		White.		Colored.		Porto Ricans.		Philippine Scouts.	
	Noneffective rates.	Admission rates.	Noneffective rates.	Admission rates.	Noneffective rates.	Admission rates.	Noneffective rates.	Admission rates.	Noneffective rates.	Admission rates.
Venereal diseases....	4.62	103.52	4.68	105.81	6.25	136.30	4.82	89.57	1.96	34.33
Tuberculosis.....	1.72	3.56	1.74	3.44	2.69	4.65	.19	1.47	.58	4.54
Mental alienation...	.85	3.74	.89	3.88	1.04	3.27	.28	1.47	.16	2.36
Bronchitis.....	.62	34.56	.63	35.06	.65	36.87	.....	.....	.48	23.52
Tonsillitis, acute follicular.....	.59	42.44	.67	46.48	.34	23.60	.06	2.94	.05	3.09
Appendicitis.....	.59	8.24	.63	8.84	.65	7.24	.....	.....	.03	.73
Malaria.....	.54	25.74	.50	23.60	.17	8.44	.35	8.81	1.54	80.11
Mumps.....	.46	9.80	.47	10.30	.54	9.82	.....	.....	.17	3.09
Influenza.....	.44	32.25	.47	35.06	.31	22.40	.10	2.94	.04	1.63
Diarrhea and enteritis.....	.41	31.76	.42	31.87	.29	26.19	.23	17.62	.45	37.60
Measles.....	.40	6.45	.45	7.22	.01	.34	.....	.....	.07	1.45
Articular rheumatism, acute and chronic.....	.38	5.52	.41	5.92	.28	4.13	.41	4.41	.03	.54
Hernia.....	.36	3.59	.38	3.89	.26	2.24	.....	.....	.08	.73

It will be seen from the above tabulation that the white troops have next to the highest rate for venereal diseases, 105.81 per 1,000; the colored troops the highest, with 136.30, while the native troops (Porto Ricans and Philippine Scouts) had the lowest rate, 89.57 and 34.33, respectively.

INFLUENCE OF RACE.

[See Tables 67 and 75.]

Table No. 67 shows that the white troops had the highest admission rate, while the colored troops have the highest death, discharge, and noneffective rates. Porto Rico had the lowest admission and discharge rate, and the Philippine Scouts the lowest death and noneffective rates. The admission rates were: White troops, 745.17; colored, 735.87; Philippine Scouts, 573.84; and Porto Ricans, 555.07. The constantly noneffective rates were: Colored, 28.46; white, 25.70; Porto Ricans, 22.78; and Philippine Scouts, 15.68 per 1,000. The discharge rates were: Colored, 15.85; white, 14.16; Philippine Scouts, 11.44; and the Porto Ricans, 7.34 per 1,000. The death rates were: Colored, 5.51; white, 4.54; Porto Ricans, 4.41; and the Philippine Scouts, 2.54 per 1,000. The rates for total losses were: Colored, 21.36; white, 18.70; Philippine Scouts, 13.98; and Porto Rican troops, 13.45 per 1,000. The average number of days lost for each case treated was: Porto Ricans, 14.98; colored, 14.12; white, 12.59; and Philippine Scouts, 9.97 per 1,000.

COMPARISON WITH FOREIGN ARMIES.

As in previous years it has been customary to make an effort to compare the health conditions in the United States with the same conditions in the armies of Great Britain, the continental powers, and Japan. Owing to the unusual conditions which have existed throughout the calendar year 1915 in Europe, no effort at comparison is made in this report.

SURGICAL OPERATIONS.

Table No. 66 shows the principal surgical operations performed by medical officers upon the personnel of the Army. Operations upon families of officers and enlisted men and other civilians who are entitled to treatment at Army hospitals at the various posts are not included. During the year 1915 there were 6,323 operations performed, of which 6,244 were successful, 36 partially successful, and 15 failures; 28 deaths resulted. Of the anesthetics used, ether was more prominent, being used in 2,459 cases, chloroform in 135, local anesthesia in 2,865, chloroform and ether or gas in 63, and other general anesthetics in 7 cases. Six hundred and eleven appendectomies were performed, of which 15 were gangrenous, 6 resulting in death; 289 herniotomies and 14 operations for goiter.

Military Departments, United States, continental {excluding Alaska} showing the relative Admission, Discharge, and Death rates for Disease, Officers and enlisted men, year, 1915.



Note: Above figures do not include General Hospitals, Recruit Depots, Independent Stations, and Infantry Divisions on the Mexican Border.

UNITED STATES (CONTINENTAL) EXCLUSIVE OF ALASKA.

ADMISSION RATE.

Cases only are counted; readmissions for the same illness are omitted in counting cases. Table No. 81 shows case admissions and total admissions for enlisted American troops of the Army for the United States and American troops, Philippine Islands, 1904 to 1911, inclusive.

Year.	Case admission rate.			Non-effective rate, all causes.	Highest noneffective rate for disease.	
	All causes.	For disease.	External causes.		Venereal.	Tuberculosis.
1915.....	704.01	564.49	139.52	25.74	3.99	2.33
1914.....	629.84	498.83	131.01	23.37	3.75	2.28
1913.....	619.90	487.94	131.96	22.94	3.58	2.34
1912.....	738.70	596.94	141.76	27.15	5.96	1.66
1911.....	837.00	680.00	157.00	31.40	8.82	1.68
1910.....	840.00	662.00	178.00	33.95	10.14	1.87

The admission rate for 1915, 704.01, is slightly higher than for the preceding year; this rate is compared with the rate for five years preceding in the total above. The noneffective is lower than the average for preceding five years.

DISCHARGES FOR DISABILITY.

The disability discharge rate for the United States for 1915 was 13.60 per 1,000, as compared with 14.82 for 1914, 13.45 for 1913, 14.48 for 1912, 15 for 1911 and 15.28 for 1910. It will be noted that the rate is considerably lower than for 1914.

TABLE NO. 7.—Discharges for disability, year 1915, United States, continental (excluding Alaska).

Causes of discharge.	Number dis- charged.	Per cent- age of total dis- charges for dis- eases or ex- ternal causes.	Discharges for disability.				
			In line of duty.	Not in line of duty.		Discharged for disability before assignment.	
				Con- tracted before enlist- ment.	Con- tracted after enlist- ment.	In line of duty.	Not in line of duty.
DISEASES.							
Nervous system and organs of special sense.	286	37.09	70	201	15	4	42
Nervous system.....	253	32.81	52	187	14	3	40
Mental alienation.....	164	21.27	21	131	12	.....	24
Dementia precox.....	93	9.47	11	82	.....	.....	12
Defective mental development.....	36	4.67	.....	36	.....	.....	8
General paralysis of the insane.....	12	1.56	.....	.....	12	.....	.....
Psychosis maniac depressive.....	7	.91	1	6	.....	.....	2
Psychasthenia.....	1	.13	1	.....	.....	.....	.....
Psychosis, traumatic.....	1	.13	1	.....	.....	.....	.....
Other forms of mental alienation....	14	1.82	7	7	.....	.....	2
Epilepsy.....	39	5.06	2	37	.....	.....	12
Neurasthenia.....	12	1.56	6	6	.....	.....	1
Hysteria.....	10	1.30	3	7	.....	.....	.....

TABLE NO. 7.—Discharges for disability, year 1915, United States, continental (excluding Alaska)—Continued.

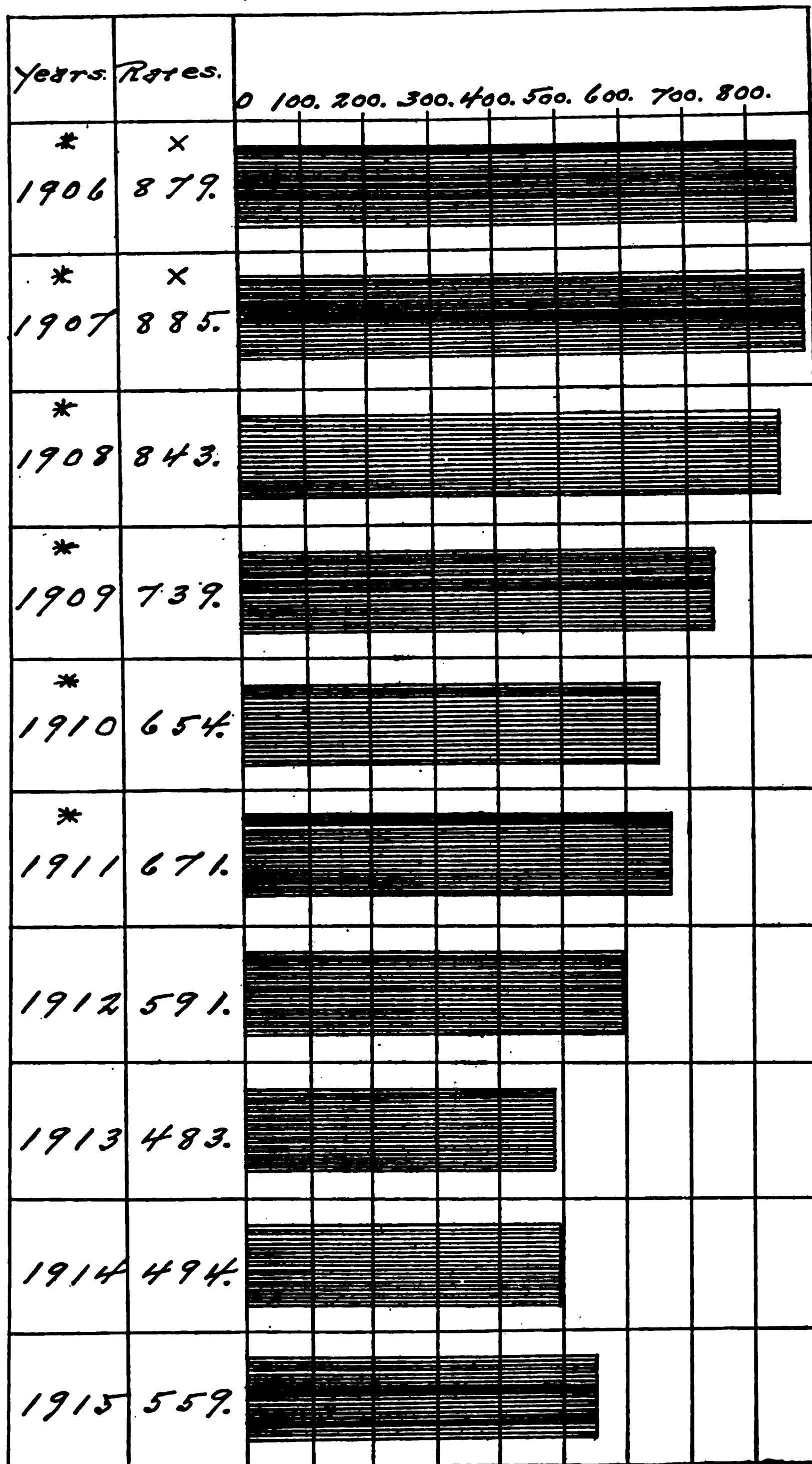
Causes of discharge.	Number discharged.	Per cent- age of total dis- charges for dis- eases or ex- ternal causes.	Discharges for disability.				
			In line of duty.	Not in line of duty.		Discharged for disability before assignment.	
				Con- tracted before enlist- ment.	Con- tracted after enlist- ment.	In line of duty.	Not in line of duty.
DISEASES—continued.							
Nervous system—Continued							
Neuritis.....	6	0.78	5	1			
Epidemic cerebrospinal meningitis.....	6	.78	5	1		2	1
Paralysis without specified cause.....	4	.52	4				
Meningitis, simple.....	2	.26	2				
Locomotor ataxia.....	2	.26			2		
Others of the spinal cord.....	3	.39	2	1			
Others of the nervous system.....	5	.65	2	3			1
Diseases of the eye.....	20	2.59	10	9	1		
Cataract.....	4	.52	4				
Conjunctivitis.....	2	.26	1	1			
Amblyopia.....	2	.26		2			
Iritis.....	2	.26		2			
Others of the eye.....	10	1.30	5	4	1		
Diseases of the ear.....	13	1.69	8	5		2	1
Otitis media.....	11	1.43	7	4		2	1
Others of the ear.....	2	.26	1	1			
General diseases.....	228	29.57	115	67	46	13	23
Tuberculosis.....	108	14.01	80	27	1	2	11
Pulmonary, chronic.....	101	13.10	75	25	1	1	11
Of the pleura.....	2	.26	1	1		1	
Of the vertebra.....	1	.13	1				
Abdominal.....	2	.26	1	1			
Of other organs.....	2	.26	2				
Venereal diseases.....	57	7.39	1	25	31		5
Syphilis.....	35	4.54		21	14		3
Tertiary.....	23	2.98		15	8		2
Secondary.....	9	1.17		3	6		
Hereditary.....	1	.13		1			
Period undetermined.....	2	.26		2			1
Gonorrhea.....	20	2.59	1	4	15		2
Arthritis, gonorrheal.....	13	1.69		3	10		1
Urethritis.....	4	.52		1	3		1
Of the eye (innocently incurred).....	1	.13	1				
Epididymitis, gonorrheal.....	1	.13			1		
Other gonorrheal infections.....	1	.13			1		
Chancroid.....	2	.26			2		
Articular rheumatism.....	17	2.20	9	5	3	3	3
Chronic articular.....	13	1.69	6	5	2	2	2
Acute articular.....	4	.52	3		1	1	1
Epidemic diseases.....	13	1.69	12	1		8	
Measles.....	8	1.04	8			8	
Dysentery, entamoebic.....	4	.52	4				
Erysipelas.....	1	.13		1			
Alcoholism, chronic.....	13	1.69		5	8		2
Exophthalmic goiter.....	8	1.04	4	4			2
Cancer.....	5	.65	5				
Drug habit.....	2	.26			2		
Leukemia.....	2	.26	1		1		
Hodgkins' disease.....	1	.13	1				
Diabetes.....	1	.13	1				
Pellagra.....	1	.13	1				
Diseases of the organs of locomotion.....	111	14.40	29	82		1	5
Flat foot.....	77	9.99	9	68			4
Arthritis.....	13	1.69	11	2		1	1
Synovitis.....	7	.91	5	2			
Hallux valgus.....	3	.39		3			
Mastoiditis.....	1	.13	1				
Periostitis.....	1	.13		1			
Rheumatism, muscular.....	1	.13		1			
Tenosynovitis.....	1	.13	1				
Others of the order.....	7	.91	2	5			1
Diseases of the genito-urinary system (non-venereal).....	44	5.71	9	35			9
Enuresis.....	27	2.50		27			9
Bright's disease.....	10	1.30	7	3			
Nephrolithiasis.....	3	.39	1	2			
Calculus in bladder.....	1	.13		1			
Hematuria, renal.....	1	.13	1				
Urethra, diseases of.....	1	.13		1			
Hydrocele.....	1	.13		1			

TABLE NO. 7.—Discharges for disability, year 1915, United States, continental (excluding Alaska—Continued.

Causes of discharge.	Number discharged.	Per cent- age of total dis- charges for dis- eases or ex- ternal causes.	Discharges for disability.				
			In line of duty.	Not in line of duty.		Discharged for disability before assignment.	
				Con- tracted before enlist- ment.	Con- tracted after enlist- ment.	In line of duty.	Not in line of duty.
DISEASES—continued.							
Diseases of the circulatory system.....	37	4.80	18	10	3	1	4
Organic heart disease.....	29	3.76	15	11	3	1	4
Valvular disease.....	25	3.24	13	11	1	1	4
Chronic endocarditis.....	4	.52	2		2		
Varicose veins.....	2	.26		2			
Acute endocarditis.....	1	.13	1				
Angina pectoris.....	1	.13		1			
Arterial sclerosis.....	1	.13	1				
Embolism.....	1	.13	1				
Varicocele.....	1	.13		1			
Tachycardia.....	1	.13		1			
Diseases of the digestive system.....	38	4.93	21	16	1	1	7
Inguinal hernia.....	14	1.82	7	6	1	1	5
Other hernia.....	3	.39	2	1			
Ulcer of stomach.....	2	.26	1	1			
Gastritis, chronic catarrhal.....	2	.26	1	1			
Dillatation of the stomach.....	1	.13		1			
Others of the stomach.....	2	.26	2				
Dental caries.....	1	.13		1			
Hypertrophic tonsils.....	1	.13		1			
Hyperchlorhydria.....	1	.13		1			1
Ankylostomiasis.....	1	.13		1			1
Appendicitis.....	1	.13	1				
Constipation.....	1	.13	1				
Cirrhosis of liver.....	1	.13	1				
Billiary calculi.....	1	.13	1				
Cholecystitis.....	1	.13	1				
Subphrenic abscess.....	1	.13	1				
Others of the intestines.....	1	.13		1			
Others of the liver.....	1	.13	1				
Others of the digestive system.....	2	.26	1	1			
Diseases of the respiratory system.....	20	2.59	12	8		1	1
Pleurisy.....	7	.91	7			1	
Asthma.....	6	.78	2	4			
Goiter.....	3	.39		3			1
Bronchitis, chronic.....	2	.26	2				
Rhinitis, atrophic.....	1	.13		1			
Bronchopneumonia.....	1	.13	1				
Diseases of the skin and cellular tissues.....	6	.78	1	4	1		
Cellulitis.....	1	.13	1				
Bromidrosis.....	1	.13		1			
Chilblain.....	1	.13		1			
Hyperidrosis.....	1	.13		1			
Other skin diseases.....	2	.26		1	1		
Congenital malformations.....	1	.13		1			
Total for disease.....	771	87.71	275	430	66	21	91
EXTERNAL CAUSES.							
Fractures.....	36	33.33	34		2		
Gunshot wounds.....	25	23.15	21		4		
Secondary results of injuries.....	18	16.07	1	17		1	3
Crushing.....	8	7.41	4	1	3		1
Dislocations.....	5	4.63	4	1			1
Sprains.....	5	4.63	5				
Burns.....	3	2.78	3				
Incised wounds.....	2	1.85	1		1		
Lacerated wounds.....	2	1.85	1		1		
Punctured wounds.....	1	.93	1				
Contused wounds.....	1	.93	1				
Concussion.....	1	.93	1				
Contusion.....	1	.93	1				
Total for external causes.....	108	100.00	78	19	11	1	5
Total for disease.....	771	87.71	275	430	66	21	91
Total for external causes.....	108	12.29	78	19	11	1	5
Grand total.....	879	100.00	353	449	77	22	96

Chart M.—United States. Officers and men.

[Admission rates for disease, years 1906-1915.]



* Excess of cases deducted to correspond with years preceding 1906 and 1912 to 1915.
 * Enlisted men. officers not included.

Chart N.—United States. Enlisted men.

[Discharge rates, all causes, years 1906-1915.]

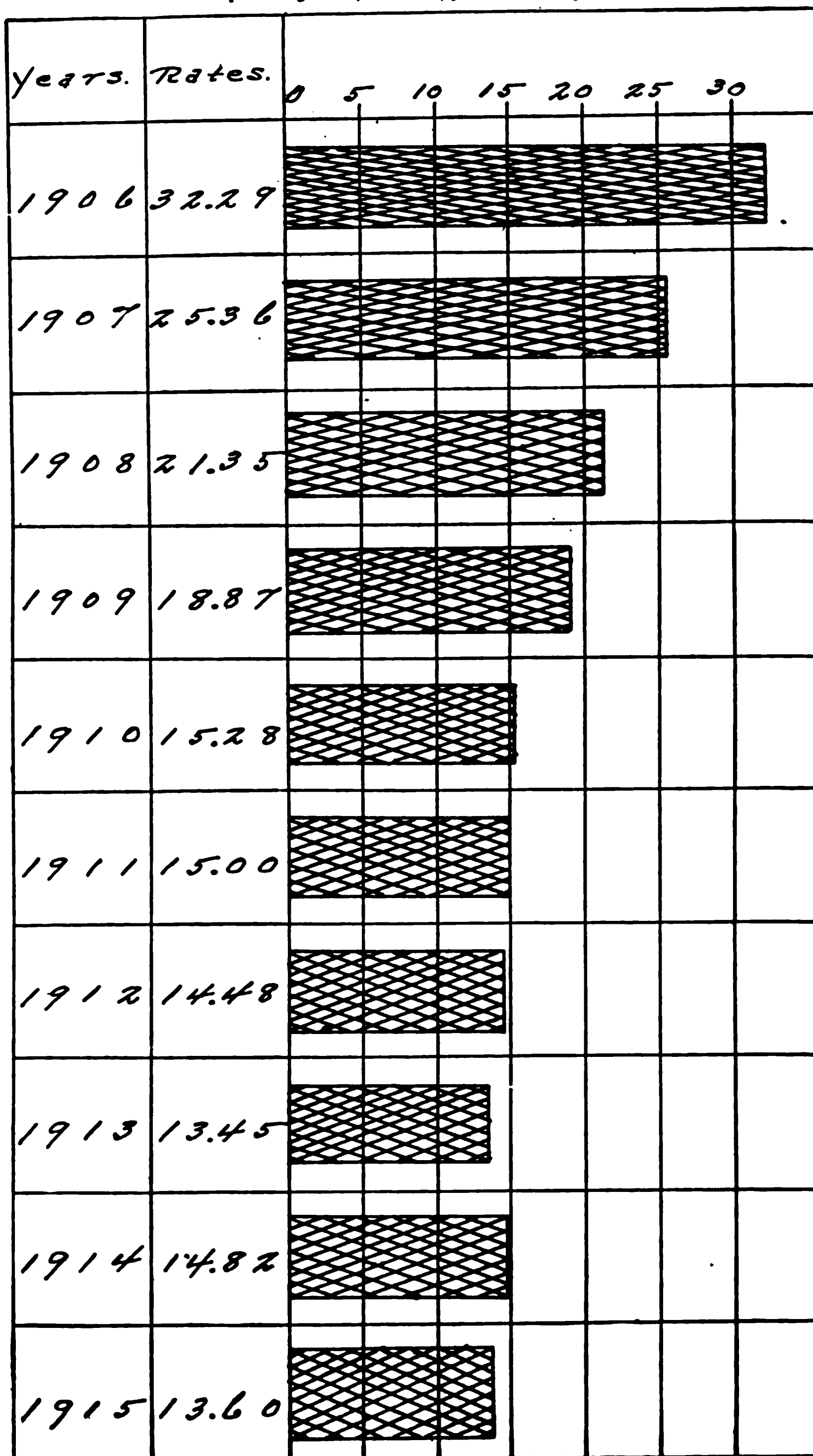


TABLE No. 8.—Deaths among officers and enlisted troops serving in the United States, continental (excluding Alaska), year 1915—Continued.

Causes of death.	Number.	Ratio per 1,000 of—	
		Mean strength.	Death from disease or external causes.
DISEASES—continued.			
Epidemic cerebrospinal meningitis.....	9	0.13	44.78
Cerebral hemorrhage, apoplexy.....	6	.09	29.85
Broncho-pneumonia.....	5	.07	24.88
Purulent infection and septicemia.....	5	.07	24.88
Influenza.....	4	.06	19.90
Venereal diseases.....	4	.06	19.90
Tertiary syphilis.....	2	.03	9.95
Secondary syphilis.....	1	.01	4.98
Gonorrhea.....	1	.01	4.98
Alcoholism, acute.....	4	.06	19.90
Diseases of the pancreas.....	4	.06	19.90
Diabetes, mellitus.....	3	.04	14.93
Mental alienation.....	3	.04	14.93
General paralysis of the insane.....	2	.03	9.95
Psychosis, maniac-depressive.....	1	.01	4.98
Pleurisy.....	3	.04	14.93
Empyema.....	2	.03	9.95
Sero-fibrinous.....	1	.01	4.98
Ulcer of duodenum.....	3	.04	14.93
Acute autumnal malarial fever.....	2	.03	9.95
Angina pectoris.....	2	.03	9.95
Aneurism.....	2	.03	9.95
Arterial sclerosis.....	2	.03	9.95
Ulcer of the stomach.....	2	.03	9.95
Intestinal obstruction.....	2	.03	9.95
Cellulitis.....	2	.03	9.95
Scarlet fever.....	1	.01	4.98
Erysipelas.....	1	.01	4.98
Benign tumor of brain.....	1	.01	4.98
Pernicious anemia.....	1	.01	4.98
Aortic stenosis.....	1	.01	4.98
Embolism.....	1	.01	4.98
Bronchitis, chronic.....	1	.01	4.98
Angina, Vincent's.....	1	.01	4.98
Dilatation of the stomach.....	1	.01	4.98
Acute yellow atrophy of the liver.....	1	.01	4.98
Cirrhosis of the liver.....	1	.01	4.98
Acute degenerative hepatitis.....	1	.01	4.98
Peritonitis, general.....	1	.01	4.98
Total for disease.....	201	2.95	555.25
EXTERNAL CAUSES.			
Suicidal.....	40	.59	248.45
By firearms (rifle, 10; revolver, 12).....	22	.32	136.65
By hanging.....	9	.13	55.90
By poison (bichloride of mercury, 2; strychnine, 1; hydrocyanic acid, 1).....	4	.06	24.84
By drowning.....	3	.04	18.63
By cutting throat with razor.....	1	.01	6.21
By jumping from balcony, striking on head.....	1	.01	6.21
Homicidal.....	17	.25	105.59
By firearms (rifle, 6; revolver, 3; not stated, 3) (by comrades, 6; by Mexicans, 3; by civilians, 2; by unknown person, 1).....	12	.18	74.53
By stab wounds (in brawls, 2; unknown, 1).....	3	.04	18.63
By blow on head from a rock by unknown man in a drunken brawl in a saloon).....	1	.01	6.21
Found dead (head mashed by unknown instrument).....	1	.01	6.21
Accidental.....	104	1.53	645.96
By drowning (during hurricane and flood at Galveston, Tex., 6; while bathing, 5; by boats overturning, 5; by falling from boats, 3; by falling from precipice into canal, 1; by being knocked overboard off trestle by train and falling into canal, 1; while attempting a rescue, 1; circumstances unknown, 3).....	25	.37	155.28
By crushing (by falling walls during hurricane and flood at Galveston, Tex., 12; by railroad trains, 3; by switch engine, 1; by street car, 1; by automobile overturning, 2; run over by, 1; on bicycle colliding with, 1; by falling with aeroplane, 1; with hydroaeroplane, 1; by being thrown from runaway team, 1; run over by wheel of cannon, 1).....	25	.37	155.28

TABLE No. 8.—Deaths among officers and enlisted troops serving in the United States, continental (excluding Alaska), year 1915—Continued.

Causes of death.	Number.	Ratio per 1,000 of—	
		Mean strength.	Death from disease or external causes.
EXTERNAL CAUSES—continued.			
	25	0.37	155.26
	7	.10	43.43
	6	.09	37.37
	4	.06	24.34
	3	.03	12.43
	1	.01	6.21
	9	.13	55.90
Total for external causes.....	161	2.36	444.75
Total for disease.....	201	2.95	555.25
Grand total.....	362	5.31	1,000.00

PREVALENCE OF SPECIAL DISEASES.

TYPHOID FEVER.

Eight cases of typhoid fever (officers and enlisted men) occurred in the entire United States Army during the calendar year 1915. Only four of these were among troops stationed in the United States, the other four occurred in the island possessions. During the year the Army was scattered over the earth through a wide range of latitude in Alaska, in Panama, in China, in Porto Rico, in Hawaii, in the Philippines, in Mexico, and in the various camps, posts and garrisons north, south, east and west of the continental territory of the United States. The mean strength for the year was 103,842.

There were no deaths from typhoid fever and no serious complications followed the cases that occurred.

Of the eight cases reported one was in the person of an officer and seven in enlisted men, including a recruit, who is now known to have been in the prodromal stage of the disease when accepted for enlistment. All except the recruit received the antityphoid vaccination; the officer four years seven months and two days before; the enlisted men showed the following intervals of time between the date of vaccination and the date of sickness:

1. Private, 8 months 18 days.
2. Private, 2 years 1 month 23 days.
3. Recruit, not vaccinated.
4. Private, 1 year 8 months 27 days.
5. Private, 1 year 8 months 12 days.
6. Private, 8 months 9 days.
7. Private, 2 years 7 months 12 days.

Of the four cases occurring in the island possessions (Schofield Barracks), three were enlisted men of the same organization, First Infantry and the fourth an enlisted man of the Fourth Cavalry, all of which occurred within a period of 25 days from the onset of the first case.

Revaccination against typhoid fever upon reenlistment is now required in the same way as revaccination against smallpox. Officers are required to be revaccinated five years after the first course. After two completed courses of vaccination are given no further is required.

Duration of immunity: The question of the duration of immunity conferred by antityphoid vaccination is still an open one, statistical information being at this time too meager to draw definite and satisfactory conclusions on this point.

The English observers from their experience in India and elsewhere have inclined to the belief that the protection against typhoid fever furnished by the vaccination as they give it, begins to decline between the second and third year following administration.

Students of this subject in our Army, including those most competent anywhere to discuss the matter have with few exceptions

ascribed a much greater degree and longer period of protection against typhoid, when the vaccination was made with the vaccine prepared by the Medical Department of the Army and given, as now prescribed, three doses at intervals of 10 days, a total of 2½ cubic centimeters, the first dose being one-half cubic centimeter, the succeeding doses 1 cubic centimeter each.

It is generally understood, of course, that the protection from the typhoid vaccine has never been considered absolute in all individuals, a certain small percentage of persons being incapable of complete immunization against the disease, as is shown by the fact that actual attacks of typhoid fever itself do not always afford freedom from a second attack. Other reasons for the appearance of typhoid among those vaccinated are inert vaccines or defective methods of administration and unusual exposure to highly infective typhoid material.

It may be stated that the disease occurring after antityphoid vaccination, with but few exceptions, shows a much milder course than ordinary, and the death rate is markedly lower among those who have received the antityphoid vaccination.

The following tabulation is for the purpose of comparing the figures for 1915 with those for the years 1914 and 1913:

Typhoid fever, the Army, officer and enlisted men, American and native troops.

Year.	Cases.		Deaths.		Immunized persons.	
	Number.	Rates for 1,000 mean strength.	Number cases.	Rates for 1,000 mean strength.	Cases.	Deaths.
1915.....	8	0.08	.....	.....	7	.....
1914.....	7	.07	3	0.03	1	.....
1913.....	4	.04	.....	.....	2	.....

Attention is invited to Chart P, showing the admission and death rates for officers and enlisted men serving in the United States. This chart shows graphically the remarkable decrease in both rates as the result of the use of the antityphoid vaccination. This vaccination was begun—but was voluntary—in 1909, and was made compulsory for the entire Army in 1911. (For the various steps from voluntary to compulsory vaccination, vide annual report of this office for 1912, pp. 52 et seq.)

The increasing use of antityphoid vaccination as a prevention against typhoid by the National Guard is to be encouraged. This procedure is now necessary before these troops can be mustered into the Federal service, or be accepted as Volunteers; and to have this already accomplished is to materially expedite the mustering in of such troops. It is also deemed desirable, in order that standardized results may be obtained, that the vaccine made for the Regular Army and supplied by the laboratory, Army Medical School, Washington, D. C., be used for the troops liable to service.

TABLE No. 9.—Typhoid fever.

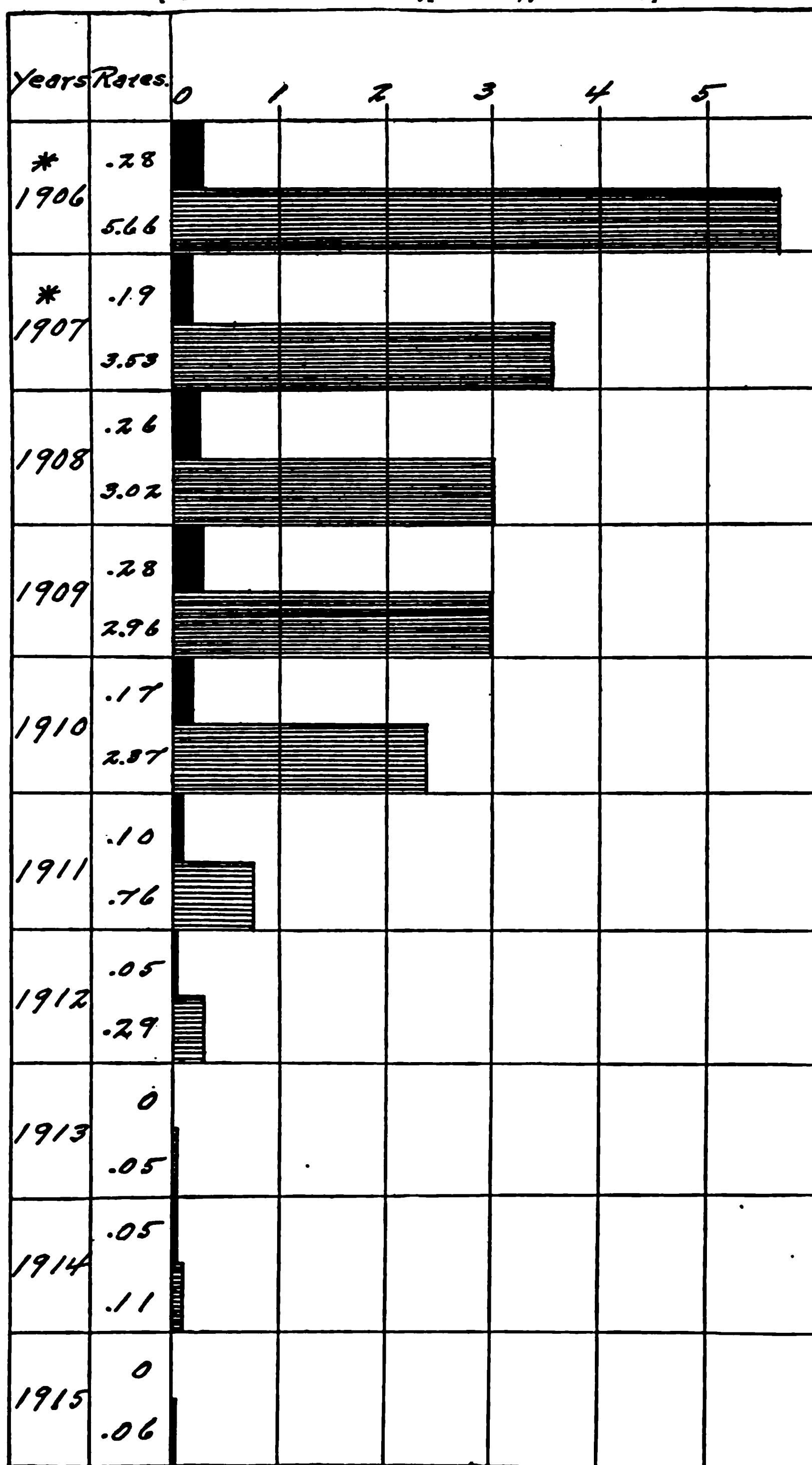
No.	Rank.	Date of enlistment or commission.	Date taken sick.	Date vaccinated.			Original diagnosis.	Laboratory findings.	Previous vaccination or typhoid.	Result of disease.	Age.	Station.	Remarks.
				First dose.	Second dose.	Third dose.							
1	First Lieutenant, Coast Artillery Corps. ¹	1908 Sept. 25	1915 Feb. 13	1910 June 20	1910 June 29	1910 July 11	Typhoid...	Blood positive for typhoid, Feb. 27, 1915.	Vac., yes; typ., no.	Duty, June 8, 1915.	28	U. S. A. mine planter Gen. S. M. Mills.	Treated at Key West Barracks, Fla.
2	Private, Troop B, Tenth Cavalry. ²	1914 Sept. 28	July 6	1914 Sept. 28	1914 Oct. 8	1914 Oct. 18	.....do.....	Blood positive for typhoid, July 15, 1915.	Vac., no; typ., no.	Duty, Aug. 13, 1915.	22	Fort Huachuca, Ariz.	Felt badly for several days before admission to sick report.
3	Cook, Troop H, Third Cavalry. ³	1913 May 27	Aug. 8	1913 May 27	1913 June 5	1913 June 15	Malta fever.	Blood positive for typhoid, A. M. School.	Vac., no; typ., no.	Duty, Sept. 19, 1915.	26	Mission, Tex.	Felt badly for couple of weeks before transfer to Fort Sam Houston, Tex.
4	Recruit, Cavalry..	1915 Oct. 9	Oct. 12	(⁴)	(⁴)	(⁴)	Typhoid...	Blood positive for typhoid fever, Oct. 23, 1915.	Vac., no; typ., no.	Duty, Jan. 3, 1916.	19	Fort Oglethorpe, Ga.	Vaccinated against smallpox Oct. 9, 1915.
5	Private, Company F, First Infantry. ⁵	1914 Jan. 2	Oct. 19	1914 Jan. 2	1914 Jan. 12	1914 Jan. 23	.....do.....	Blood positive for typhoid fever.	Vac., no; typ., no.	Duty, Dec. 23, 1915.	24	Schofield Barracks, Hawaii.	Taken sick while on maneuvers.
6	Private, Company I, First Infantry. ⁵	Jan. 27	Oct. 28	Jan. 27	Feb. 6	Feb. 16	.....do.....	Blood positive for typhoid fever, Nov. 4, 1915.	Vac., no; typ., no.	Duty, Jan. 31, 1916.	24	.....do.....	Relapses, Dec. 24, 1915; Widal positive, Nov. 13, 1916.
7	Private, Company E, First Infantry. ⁵	1915 Feb. 4	Nov. 2	1915 Feb. 3	1915 Feb. 13	1915 Feb. 23	.....do.....	.....do.....	Vac. no; typ., no.	.....do.....	19	.....do.....	Widal positive.
8	Private, Troop K, Fourth Cavalry. ⁶	1913 Mar. 10	Nov. 13	1913 Mar. 11	1913 Mar. 21	1913 Apr. 1	.....do.....	Blood positive for typhoid, Nov. 23, 1915.	Vac., no; typ., no.	Duty, Jan. 19, 1916.	24	.....do.....	Widal positive, Nov. 24, 1915.

¹ Fort Washington, Md.
² Fort McDowell, Cal.

³ Columbus Barracks, Ohio.
⁴ Jefferson Barracks, Mo.

⁵ Fort Slocum, N. Y.
⁶ Not vaccinated; feeling badly at time of enlistment.

Chart P.—United States. Officers and men.
 [Admission and death rates for typhoid fever, years 1906-1915.]



Deaths. 


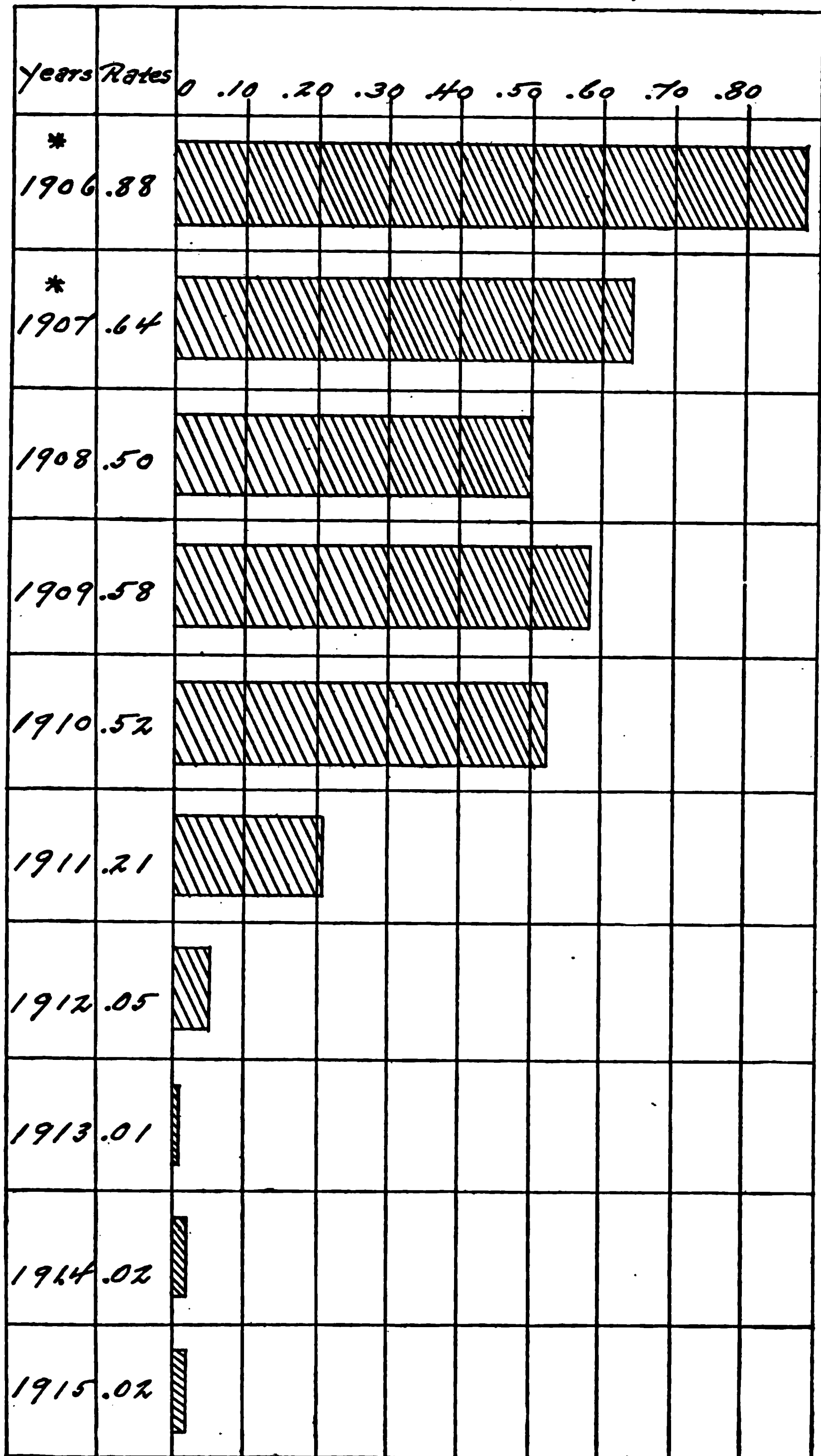
Admissions. 

Chart P¹.—United States. Officers and men.

[Noneffective rates for typhoid fever, years 1906-1915.]



* Enlisted men.

* Officers not included.

Chart Q.—Army. Officers and American and native troops.
[Admission rates for typhoid fever, years 1906-1915.]

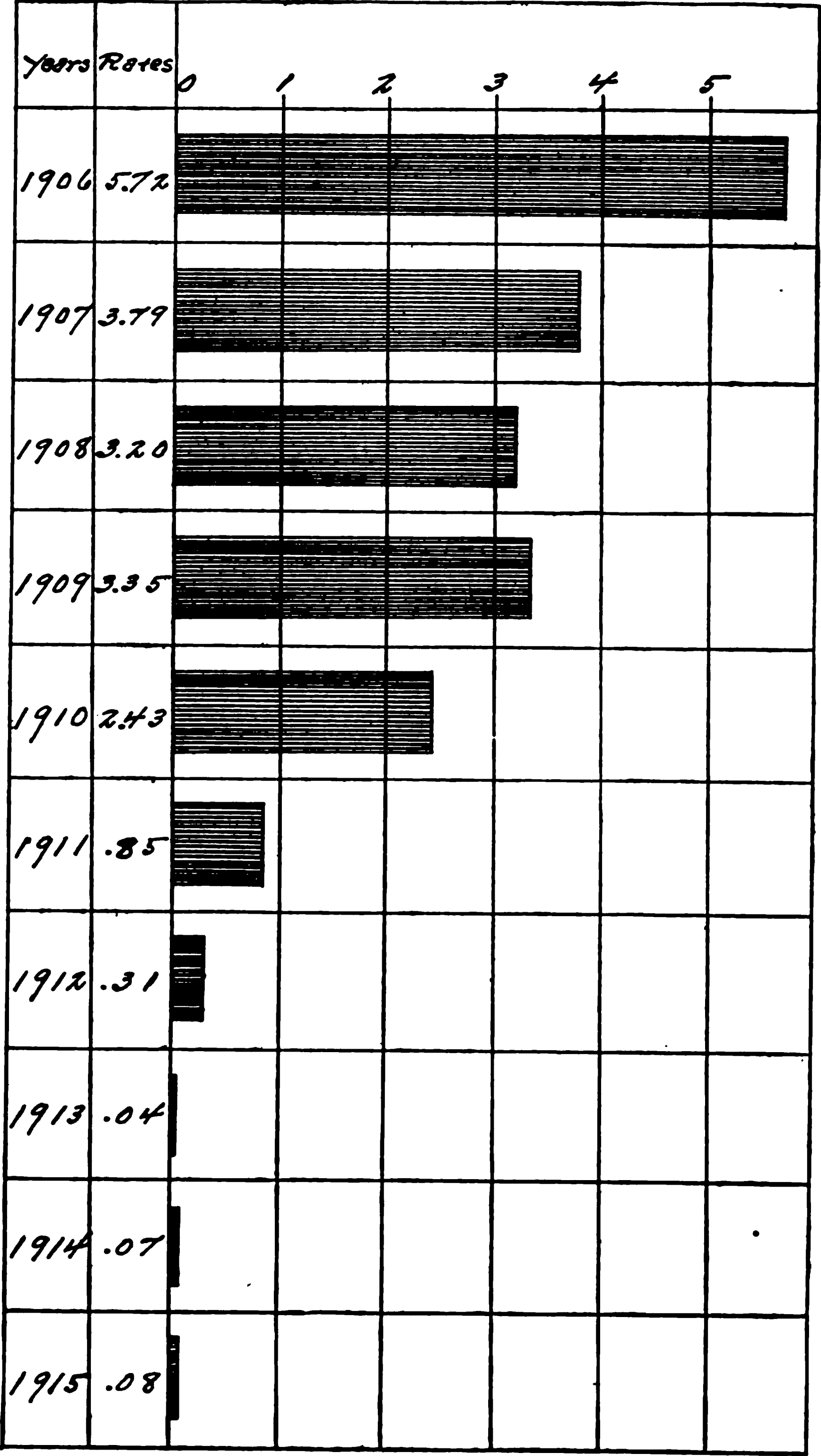
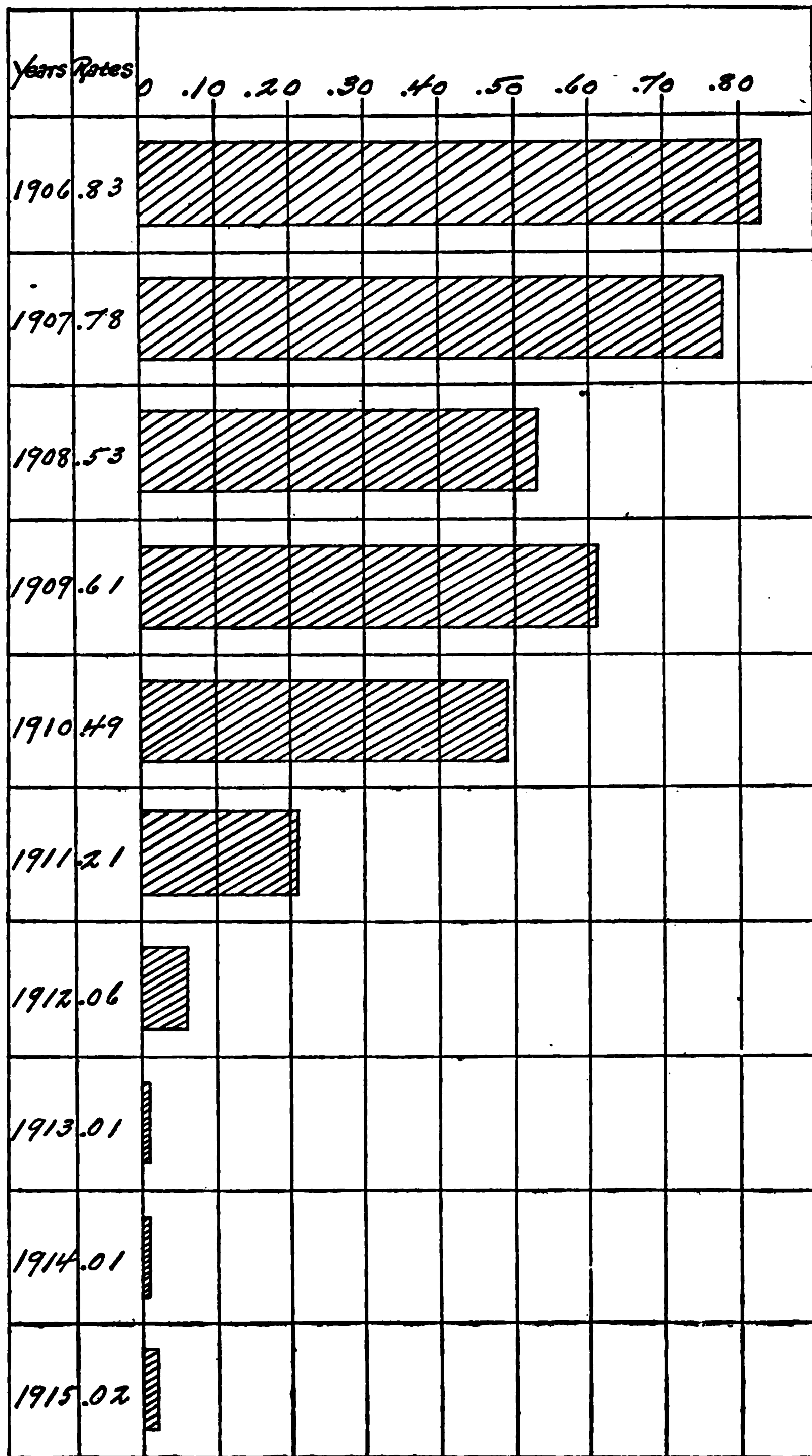


Chart Q¹.—Army. Officers and American and native troops.

[Noneffective rates for typhoid fever, years 1906-1915.]



Intervals of time elapsing between antityphoid vaccination and onset of typhoid fever, with number of cases and stations, years 1913, 1914, and 1915.

Year	Case No.	Date taken sick.	Number of doses.	Interval of time.			Station.
				Yrs. Mos. Days.			
1913.....	¹ 1	1913. June 26	.....	.....	.....	.....	Snelling, Fort, Minn.
	2	Nov. 24	3	1	3	8	Stevens, Fort, Oreg.
	¹ 3	Dec. 13	.....	.....	.....	.....	McDowell, Fort, Cal.
	4	Oct. 23	3	2	0	23	Tientsin, China.
1914.....		1914.					
	¹ 1	Feb. 26	1	0	0	3	Jefferson Barracks, Mo.
	2	Mar. 23	3	1	3	21	Niagara, Fort, N. Y.
	3	June 24	2	2	2	23	Madison Barracks, N. Y.
	¹ 4	July 4	.....	.....	.....	.....	Columbus Barracks, Ohio.
	¹ 5	Sept. 11	2	0	0	3	Slocum, Fort, N. Y.
	¹ 6	Nov. 22	.....	.....	.....	.....	Columbus Barracks, Ohio.
1915.....		1915.					
	1	Feb. 13	3	4	7	2	Key West Barracks, Fla.
	2	July 6	3	0	8	18	Huachuca, Fort, Ariz.
	3	Aug. 8	3	2	1	23	Mission, Tex.
	¹ 4	Oct. 12	.....	.....	.....	.....	Oglethorpe, Fort, Ga.
	5	Oct. 19	3	1	8	27	Schofield Barracks, Hawaii.
	6	Oct. 28	3	1	8	12	Do.
	7	Nov. 2	3	0	8	9	Do.
	8	Nov. 13	3	2	7	12	Do.

¹ Indicates recruit; no doubt in the prodromal stage of the disease when enlisted.

PARATYPHOID FEVER.

Table No. 10 shows that nine cases of paratyphoid fever occurred in the entire Army during the calendar year 1915, eight of which were confirmed by bacteriological diagnosis, the other being diagnosed clinically. Three of these cases (Nos. 1, 3 and 8) were reported from the Philippine Islands, and one from the Hawaiian Islands, leaving but five distributed throughout the United States—two at Fort Leavenworth, Kans., and one each at Fort Niagara, N. Y., Presidio of San Francisco, Cal., and Douglas, Ariz. All cases had received the full three doses of the antityphoid vaccine (see footnote), except case No. 1, to whom it was administered after his return to duty, and case No. 9, appointed from the Naval Academy, who had not received the prescribed three doses due to the fact that antityphoid vaccination was not instituted in the naval service until 1912, the officer in question having been commissioned in the Army, September 28, 1911.

It is, of course, well understood that paratyphoid fever is a distinct clinical entity and is not typhoid fever, though sometimes resembling atypical cases of that disease. It is caused by a different micro-organism, the bacillus paratyphosus, of which two types are distinguishable: *B. paratyphosus* A and *B. paratyphosus* B. In western Europe, as reported, paratyphoid fever is much more frequently due to the B type of bacillus than to the A type. Clinically they are hardly distinguishable, but it is stated that the A fever is apt to last three or four days longer.

Of the nine cases of paratyphoid fever among our troops in 1915, six were caused by the bacillus paratyphosus A, two by the bacillus paratyphosus B, and in the remaining case the diagnosis was clinical.

An important feature in the prevention of paratyphoid fever, as in typhoid fever, is the active searching-out of "carriers" and their prompt isolation and treatment.

NOTE.—It must be understood that antityphoid vaccine is not effective in the prevention of paratyphoid fever.

TABLE NO. 10.—Paratyphoid fever, 1915.

No.	Rank.	Age.	Organization.	Service.	Date taken sick.	Where sick.	On duty at—	Laboratory findings.	Vaccinated against typhoid.	Result of disease.
1	Private...	27	Twenty-sixth Company Philippine Scouts.	Yrs. mos. 4 1	1915. Jan. 1	Camp Keithley, Mindanao, P. I.	Camp Keithley, Mindanao, P. I.	B. Paratyphosus, type A, pure culture from urine.	3 doses, Feb. 4, 15, and 26, 1915, Camp Keithley, P. I.	Duty Jan. 30, 1915.
2	Corporal...	25	Company L, Twenty-ninth Infantry.	6 4	Jan. 17	Fort Niagara, N. Y.	Fort Niagara, N. Y.	B. Paratyphosus, type A, blood, Army Medical School laboratory.	3 doses, May, 1911, and 1	Duty Mar. 5, 1915.
3	Private...	27	Company I, Twenty-fourth Infantry.	5 5	Mar. 24	Camp Eldridge, Laguna, P. I.	Camp Eldridge, Laguna, P. I.	B. Paratyphosus, type B.	3	Duty Apr. 27, 1915.
4	...do.....	25	Battery F, First Field Artillery.	3 3	June 3	Schofield Barracks and department hospital, Honolulu.	Schofield Barracks, Honolulu.		3 McDowell, Cal.	Duty Aug. 23, 1915.
5	...do.....	23		2 2	June 24	Letterman General Hospital, San Francisco, Cal.	Franklin of San Francisco, Cal.	B. Paratyphosus, type A, blood and stool.	3 doses, completed, Aug. 15, 1913, Jefferson Barracks, Mo.	Duty July 24, 1915.
6	...do.....	23		3 3	Aug. 12	Fort Leavenworth, Kans.	Fort Leavenworth, Kans.	Blood and stools negative; diagnosis, clinical.	3 doses, Dec. 1911, and	Duty Sept. 15, 1915.
7	...do.....	20	Troop H, Fifth Cavalry.	1 7	Aug. 15	.....do.....	.....do.....	B. Paratyphosus, type B, isolated from blood.	3	Do.
8	...do.....	23	Twenty-sixth Company Philippine Scouts.	1 5	Nov. 12	Camp Keithley, Mindanao, P. I.	Camp Keithley, Mindanao, P. I.	B. Paratyphosus, type A.	3 previous vaccination.	Duty Dec. 24, 1915.
9	Second lieutenant.	27	Sixth Field Artillery, appointed from Naval Academy.	4	Nov. 24	Douglas, Ariz....	Douglas, Ariz....		Officer states had 2 doses about nine years ago.	

It may be stated at this time that paratyphoid fever, heretofore but unfrequently met with in our Army, appeared in the New York division of the National Guard, stationed in the Brownsville district, in August, 1916, principally among the troops at Mission, Tex. A few scattering cases at other points occurred in the same district; in all a total of 120 cases.

The outbreak of this disease was promptly and satisfactorily met. The vaccination against paratyphoid with a mixed Para-typhoid A. and B. vaccine prepared in the laboratories of the Army Medical School was authorized; the searching out of possible "carriers" of the disease was vigorously prosecuted; camp sites were changed, and all sanitary orders rigidly enforced under the direction of inspectors of the Army Medical Corps.

VENEREAL DISEASES.

Special measures for protection against this class of infectious diseases were formulated five years ago, since which time, so far as lies in the power of the Medical Department, they have been vigorously and conscientiously carried out, and it is further believed that in the great majority of instances there has been no laxness in the strict enforcement of the regulations by others in military authority. It should be understood that the prime source of infection in venereal disease lies not within military jurisdiction and control, but in the civilian life, quite apart from the immediate garrison life of the soldier and the rigid supervision incident thereto.

TABLE No. 12.—Venereal diseases, Army and United States continental (excluding Alaska) enlisted American troops, compared for years 1913, 1914, and 1915.

	Army (enlisted American troops).			United States continental (excluding Alaska) enlisted men.		
	1915	1914	1913	1915	1914	1913
Ratios per 1,000 of mean strength for:						
Cases admitted.....	107.71	110.69	97.22	83.60	89.84	85.83
Men constantly noneffective.....	4.78	4.73	4.51	3.99	3.75	3.58

TABLE No. 13.—Venereal diseases, admissions and discharges, Army American troops (enlisted men), year 1915.

	Mean strength.	Syphilis.				Chancroid.			
		Admissions.		Discharges.		Admissions.		Discharges.	
		Num-ber.	Ratio.	Num-ber.	Ratio.	Num-ber.	Ratio.	Num-ber.	Ratio.
United States.....	63,725	1,099	17.24	35	0.54	1,007	15.80	2	0.03
Alaska.....	763	3	3.93	.....	.....	6	7.86	.....	.....
Philippines.....	11,834	482	40.73	6	.50	450	38.02	.....	.....
Hawaii.....	8,572	236	27.53	4	.45	96	11.20	.....	.....
Panama.....	5,721	91	15.91	1	.17	300	52.44	.....	.....
China.....	1,335	68	50.94	1	.75	286	214.23	.....	.....
Army transports.....	1,312	13	9.91	.....	.....	41	31.25	.....	.....
Total.....	93,202	1,992	21.36	47	.50	2,186	23.44	2	.03

TABLE NO. 13.—Venereal diseases, admissions and discharges, Army American troops (enlisted men), year 1915—Continued.

	Gonorrhea.				Total.			
	Admissions.		Discharges.		Admissions.		Discharges.	
	Num-ber.	Ratio.	Num-ber.	Ratio.	Num-ber.	Ratio.	Num-ber.	Ratio.
United States.....	3,222	50.56	20	0.31	5,328	83.60	57	0.88
Alaska.....	18	23.59	.....	.....	27	35.39	.....	.....
Philippines.....	1,273	107.57	5	.42	2,205	186.32	11	.93
Hawaii.....	517	60.31	1	.11	849	99.04	5	.56
Panama.....	390	68.17	3	.51	781	136.51	4	.68
China.....	319	238.95	.....	.....	673	504.12	1	.75
Army transports.....	128	97.56	.....	.....	182	138.72	.....	.....
Total.....	5,867	62.91	29	.31	10,045	107.71	78	.82

	Total days.	Con-stantly sick.	Ratio per 1,000.
Syphilis.....	45,708	125.23	1.34
Chancroid.....	29,653	81.24	.87
Gonorrhea.....	87,216	238.95	2.56
Total.....	162,577	445.42	4.78

TABLE NO. 14.—Venereal diseases, by years, 1911 to 1915, United States, continental (excluding Alaska), enlisted men.

[Ratio per 1,000 of mean strength.]

	Number of cases after deducting recurrent admis-sions.	Admitted.			Discharged on certificate of disability.			Died.			Noneffective.		
		Total.	White.	Colored.	Total.	White.	Colored.	Total.	White.	Colored.	Total.	White.	Colored.
Gonorrhea and re-sults:													
1915.....	50.56	50.56	50.91	41.82	0.31	0.32	.....	0.02	0.02	.....	2.05	2.04	2.19
1914.....	51.35	51.35	52.04	28.99	.32	.33	.....	.....	.....	.....	1.80	1.81	1.44
1913.....	49.46	49.46	49.14	60.14	.66	.68	.....	.....	.....	.....	1.84	1.84	1.65
1912.....	70.07	70.07	69.87	74.36	.60	.61	0.40	.02	.02	.....	3.26	3.27	2.94
1911.....	85.37	94.52	94.48	45.12	.79	.84	.....	.....	.....	.....	4.68	4.72	3.93
Chancroid:													
1915.....	15.80	15.50	15.73	17.63	.03	.02	.41	.....	.....	.....	.72	.71	.85
1914.....	19.96	19.56	20.09	18.56	.....	.....	.....	.....	.....	.....	.80	.79	1.18
1913.....	15.38	15.38	15.11	24.76	.....	.....	.....	.....	.....	.....	.57	.56	.98
1912.....	20.09	20.09	20.52	10.45	.03	.03	.....	.....	.....	.....	1.01	1.03	.50
1911.....	23.55	25.04	25.22	21.82	.....	.....	.....	.....	.....	.....	1.32	1.34	1.05
Syphilis:													
1915.....	17.24	17.24	17.44	12.30	.54	.51	1.23	.05	.08	0.41	1.22	1.23	1.18
1914.....	18.53	18.53	18.86	7.66	.55	.43	4.38	.05	.05	.....	1.15	1.11	2.46
1913.....	20.99	20.99	20.98	21.23	.35	.29	2.36	.07	.05	.59	1.17	1.15	1.90
1912.....	25.58	25.58	25.84	19.69	.62	.61	.80	.03	.03	.....	1.70	1.68	2.11
1911.....	26.37	44.30	45.33	25.91	.52	.48	1.36	.11	.11	.....	2.82	2.85	2.30
Total venereal:													
1915.....	83.60	83.60	84.08	71.75	.88	.85	1.64	.06	.05	.41	3.99	3.98	4.22
1914.....	89.84	89.84	90.99	52.52	.87	.77	4.38	.05	.05	.....	1.15	1.11	2.46
1913.....	85.83	85.83	85.23	106.18	1.01	.97	2.36	.07	.05	.59	3.58	3.55	4.53
1912.....	115.74	115.74	116.24	104.50	1.26	1.26	1.21	.05	.05	.....	5.96	5.98	5.55
1911.....	145.29	163.85	165.03	142.85	1.31	1.31	1.36	.11	.11	.....	8.82	8.91	7.29

TABLE No. 15.—*Syphilis, United States, continental (excluding Alaska), years 1911 to 1915, enlisted men.*

[Ratio per 1,000 of mean strength.]

Year.	Primary syphilis.			Secondary syphilis.			Tertiary syphilis.			Hereditary syphilis.			Total.		
	Case rates.	Admission rates.	Noneffective rates.	Case rates.	Admission rates.	Noneffective rates.	Case rates.	Admission rates.	Noneffective rates.	Case rates.	Admission rates.	Noneffective rates.	Case rates.	Admission rates.	Noneffective rates.
1915....	2.86	2.86	0.15	11.53	11.53	0.67	2.39	2.39	0.35	0.06	0.06	0.01	17.24	17.24	1.23
1914....	3.10	3.10	.17	12.73	12.73	.63	2.25	2.25	.82	.05	.05	.02	18.53	18.53	1.15
1913....	2.72	2.72	.13	15.45	15.45	.73	1.90	1.90	.27	.02	.02	.01	20.99	20.99	1.17
1912....	3.89	3.89	.18	19.01	19.01	1.20	2.50	2.50	.31	.17	.17	.01	25.58	25.58	1.70
1911....	3.75	4.09	.26	28.66	35.54	2.14	3.64	4.29	.43	.33	.33	.02	36.37	44.30	2.82

TABLE No. 16.—*Recruit depots, total number of admissions, venereal diseases, with ratios and mean strength, officers and enlisted men, years 1915, 1914, and 1913.*

Recruit depots.	1915			1914			1913		
	Admissions.		Mean strength.	Admissions.		Mean strength.	Admissions.		Mean strength.
	Total.	Ratio.		Total.	Ratio.		Total.	Ratio.	
Jefferson Barracks, Mo....	222	157.11	1,413	202	135.48	1,491	170	153.15	1,110
Fort McDowell, Cal.....	104	119.40	871	97	94.36	1,028	58	74.45	779
Columbus Barracks, Ohio.	110	94.34	1,166	194	128.39	1,511	188	158.51	1,196
Fort Slocum, N. Y.....	77	59.82	1,287	129	88.30	1,461	114	104.78	1,088
Fort Logan, Colo.....	32	56.04	571	76	116.92	650	77	131.85	584
Total.....	545	102.68	5,308	698	113.66	6,141	607	127.87	4,747

The admission rate for enlisted men in the United States is somewhat lower than for 1914, being 83.60 compared with 89.84 per 1,000.

The noneffective rate was considerably higher, being 3.99 per 1,000 for 1915 as against 1.15 in 1914, which may be accounted for (in view of a reduction in the admission rate) by the presence in hospital for a greater length of time of cases of syphilis, there being a decrease in the number of cases so diagnosed of 38 over 1914. For gonorrhea the number of cases is 71 more than last year, and in the local infection, chancroid, the increase is 218. In 1912 there was a large falling off in the number of secondary and tertiary cases of syphilis with a slight increase in the case rate for the primary cases. It will be noted from Table No. 15 that a like decrease has taken place in the number of cases of primary and secondary syphilis, while there is a slight increase in the rate for tertiary cases.

In comparing the figures for 1915 and 1914 with those for 1912 and 1913 and the preceding years it must be borne in mind that the diagnoses made prior to 1911 were determined without the aid of the Wassermann reaction. By reason of this many latent cases are now detected which were largely missed prior to 1911.

By reference to Table No. 12 it will be seen that the admission rate for the total American troops of the Army also was lower than for the

year 1914, the rate being 107.71 as against 110.69, while the non-effective rate was but slightly higher, being 4.78 per 1,000 in 1915 as compared with 4.73 in 1914.

TABLE NO. 17.—*Veneral diseases, officers and enlisted men, admissions and ratios per 1,000, for posts of more than 300 men, in the United States (excluding Alaska), 1914 and 1915.*

1	Fort Sam Houston, Tex.....	1,268	217	167.85	179	103.52	3
2	Fort Baker, Cal.....	307	44	143.32			
3	Fort Oglethorpe, Ga.....	1,098	156	141.17	117	265.31	1
4	Fort Bliss, Tex.....	823	112	135.09	129	191.96	2
5	Fort Lawton, Wash.....	460	62	134.78	41	93.39	15
6	Fort Screven, Ga.....	444	55	123.87	56	109.34	9
7	Presidio of San Francisco, Cal.....	1,092	120	119.05	128	98.48	12
8	Fort McIntosh, Tex.....	383	41	107.06	51	117.51	6
9	Fort Moultrie, S. C.....	397	41	108.27	41	87.42	17
10	Fort Sill, Okla.....	1,182	122	108.21	121	119.45	4
11	Presidio of Monterey, Cal.....	414	42	101.45	48	62.50	25
12	Vancouver Barracks, Wash.....	958	92	95.04	56	54.74	29
13	Fort Leavenworth, Kans.....	811	78	93.71	70	107.20	10
14	Fort Jay, N. Y.....	367	33	99.92	32	76.01	22
15	Fort Clark, Tex.....	834	48	99.89			
16	Washington Barracks, D. C.....	508	43	84.65	83	114.48	8
17	Fort Myer, Va.....	694	56	80.69	75	108.84	11
	United States (total officers and en-						
	listed men).....	66,789	5,340	79.95	5,524	83.64	
18	Fort McKinley, Me.....	500	41	73.21	77	114.83	7
19	Fort Riley, Kans.....	474	28	69.63	33	48.78	31
20	Fort Andrews, Mass.....	437	30	68.65	35	79.01	19
21	Fort Barrancas, Fla.....	637		67.50	39	63.31	24
22	Fort Monroe, Va.....	1,352		66.57	87	76.88	21
23	Fort Sheridan, Ill.....	893	26	66.16	32	96.10	13
24	Plattsburg Barracks, N. Y.....	766	59	65.28	65	83.33	18
25	Fort Ethan Allen, Vt.....	869	56	64.44	83		16
26	Fort Strong, Mass.....	470	28	59.57	27	58.70	26
27	Fort Worden, Wash.....	633	35	55.29	24	37.27	36
28	Madison Barracks, N. Y.....	641	35	54.60	26	59.90	28
29	Fort H. G. Wright, N. Y.....	683	37	54.17	40	59.88	27
30	Fort Adams, R. I.....	595	30	50.42	18	51.08	39
31	Fort Greble, R. I.....	356	17	47.75	30	94.94	14
32	Fort Totten, N. Y.....	566	27	47.71	56	77.46	20
33	Fort Terry, N. Y.....	681	31	45.52	28	41.73	35
34	Fort Rosecrans, Cal.....	510	23	45.10			
35	Fort Huachuca, Ariz.....	875	39	44.57	20	41.75	34
36	Fort Winfield Scott, Cal.....	1,098	48	43.71	22	23.01	42
37	Fort Hancock, N. J.....	750	25	33.33	28	36.32	37
38	Fort Flagler, Wash.....	340	11	32.35			
39	Fort Williams, Me.....	504	15	29.76	27	50.85	
40	Fort Casey, Wash.....	341	10	29.33	7	22.58	43
41	Fort Howard, Md.....	317	9	28.39	33	70.97	23
42	West Point, N. Y.....	838	23	27.45	15	18.14	44
43	Fort Hamilton, N. Y.....	629	14	22.26	22	36.07	38
44	Fort Wadsworth, N. Y.....	365	8	21.92			
45	Fort Stevens, Oreg.....	287	2	1.17	9	25.64	41

TABLE No. 18.—*Venereal diseases, Army, American troops, officers and enlisted men, by departments and divisions, year 1915.*

	Mean strength.			Cases.			Rates per 1,000 of mean strength.		
	Offi- cers.	En- listed men.	Total.	Offi- cers.	En- listed men.	Total.	Offi- cers.	En- listed men.	Total.
Army American troops.....	4,394	93,262	97,656	20	10,045	10,065	4.55	107.71	108.07
United States continental (excluding Alaska).....	3,064	63,725	66,789	12	5,328	5,340	3.92	83.60	79.95
Eastern Department.....	958	19,145	20,103	3	1,341	1,344	.....	70.04	66.86
Central Department.....	258	2,748	3,006	.....	199	199	.....	42.42	66.20
Southern Department (ex- cluding troops on Mexican border).....	230	5,073	5,303	.....	588	588	.....	115.91	110.88
Troops on Mexican border....	596	14,239	14,835	6	1,130	1,136	10.07	79.36	76.58
Second division, Texas.....	328	6,895	7,223	2	785	787	6.10	113.85	108.96
Western Department.....	341	7,898	8,239	.....	598	598	.....	75.72	72.59
Independent stations.....	205	2,016	2,221	.....	75	75	.....	37.20	32.77
Recruit depots.....	106	5,202	5,308	.....	545	545	.....	104.77	102.68
General hospitals.....	42	509	551	1	67	68	23.81	131.63	123.41
Alaska.....	24	763	787	.....	27	27	.....	35.39	34.31
Panama Canal Zone.....	182	5,721	5,903	1	781	782	5.49	136.51	132.48
Hawaiian Department.....	304	8,572	8,876	1	849	850	3.29	99.04	95.76
China.....	43	1,335	1,378	.....	673	673	.....	504.12	488.39
Philippine Islands (Ameri- can troops).....	666	11,834	12,500	6	2,205	2,211	9.01	186.82	176.88
Army transports.....	73	1,312	1,385	.....	182	182	.....	138.72	131.41
Philippine Scouts.....	.....	5,505	.....	.....	189	.....	.....	34.83	.....
Porto Rican Regiment.....	38	681	719	.....	61	61	.....	89.57	84.84

Table No. 16 shows the rates of admission for three years of venereal disease at the five recruiting depots. With the exceptions of Jefferson Barracks and Fort McDowell, a marked decrease in the admission rates over 1914 and 1913 is noted. Fort Logan has the lowest rate for 1915, being a reduction of over one-half compared with the rate prevailing for 1914. Taking the five recruit depots as a whole, the total admission rate is lower for 1915, being 102.68, as compared with 113.66 in 1914 and 127.87 for 1913. Jefferson Barracks has the highest rate of any of the depots, 157.11 per 1,000 in 1915, as compared with 135.48 in 1914, with a rate of 119.40 in 1915 at Fort McDowell, as compared with 94.36 for 1914.

Table No. 17 gives the relative standing and rates with reference to venereal disease for 45 posts in the United States. The post having the highest rate for venereal disease is Fort Sam Houston, Tex., changing places with Fort Oglethorpe, being third and first, respectively, for 1914. The fact that Fort Sam Houston leads all other posts for venereal disease this year can be accounted for by the mobilization of a good portion of our troops on the southern border. But such facts seem only to extenuate, but not to excuse, the failure to lower the ratio of these preventable diseases.

The most marked improvement is shown at Fort Greble, R. I., where the admission rate was reduced from 94.94 in 1914 to 47.75 per 1,000 in 1915; where formerly Greble stood No. 14 on the list, this year it stands No. 31; Fort Howard, which last year stood No. 23 on the list, this year stands No. 41, while Fort Totten moved from No. 20 last year to No. 32 this year.

MALARIAL FEVERS.

The admission rate for malarial fever, officers and enlisted men, in the United States is slightly higher than for the year 1914, being 12.37 per 1,000, as compared with 10.74 in 1914, and with the exception of 1913 is lower than for the previous three years. The rate for 1913 was 8.62; that for 1912, 13.99; that for 1911, 14.35; and for 1910, 16.07.

The noneffective rate for 1915 was 0.27, as compared with 0.24 in 1914, 0.18 in 1913, 0.30 in 1912, and 0.35 per 1,000 in 1911.

No discharges, but 2 deaths, resulted from malarial fevers during the year. Chart R shows comparative rates for this disease for the entire command, including officers.

TABLE NO. 19.—Malarial infections, United States, continental (excluding Alaska), years 1911 to 1915, inclusive, officers and enlisted men.

[Ratio per 1,000 of mean strength.]

Malarial fevers.	Admitted.					Noneffective.					Discharges.	Deaths.
	Total United States.	Officers.	Enlisted men.			Total United States.	Officers.	Enlisted men.				
			Total.	White.	Colored.			Total.	White.	Colored.		
Quartan and tertian:												
1915.....	9.25	5.22	9.44	9.61	5.33	0.20	0.22	0.20	0.20	0.09	.....	.....
1914.....	9.28	5.68	9.45	9.67	2.19	.18	.16	.18	.18	.09	.....	.....
1913.....	7.16	4.17	7.31	7.50	1.18	.14	.14	.13	.14	.01	.....	.....
1912.....	12.20	7.92	12.42	12.80	2.01	.24	.12	.24	.25	.04	.....	.....
1911.....	13.26	6.25	13.63	14.36	.68	.28	.06	.29	.30	.01	.....	.....
Estivo-autumnal:												
1915.....	1.87	.33	1.95	1.97	1.23	.04	.07	.04	.04	.04	.....	0.03
1914.....	.71	2.00	.65	.67	.....	.03	.....	.02	.02	.....	.....	.....
1913.....	.69	.96	.67	.69	.....	.02	.02	.13	.14	.01	.....	.....
1912.....	.94	.66	.96	1.00	.....	.03	.02	.24	.25	.04	.....	.....
1911.....	.88	.69	.89	.94	.....	.04	.06	.29	.30	.01	.....	.....
Malaria cachexia and undetermined malarial fever:												
1915.....	1.24	1.63	1.23	1.27	.....	.03	.10	.03	.03	.....	.....	.....
1914.....	.75	2.00	.69	.71	.....	.03	.....	.04	.04	.....	.....	.....
1913.....	.78	.32	.81	.64	6.49	.03	.00	.02	.02	.11	0.02	.....
1912.....	.85	.99	.84	.77	2.41	.03	.03	.02	.02	.02	.....	.....
1911.....	.21	1.04	.16	.17	.....	.02	.11	.02	.02	.....	.....	.....
Total malarial diseases:												
1915.....	12.37	7.18	12.62	12.86	6.56	.27	.40	.27	.27	.13	.....	.06
1914.....	10.74	9.68	10.79	11.05	2.19	.24	.37	.24	.24	.06	.....	.....
1913.....	8.62	5.45	8.79	8.82	7.67	.18	.16	.18	.18	.12	.02	.....
1912.....	13.99	9.57	14.22	14.25	4.42	.29	.17	.30	.31	.06	.....	.....
1911.....	14.35	7.99	14.68	15.47	.68	.34	.24	.35	.36	.01	.....	.....

TABLE NO. 20.—The 10 posts of more than 200 (officers and enlisted men) in the United States, continental (excluding Alaska), having the highest admission rates for malarial diseases, year 1915, compared with 1914.

[Ratio per 1,000 of mean strength.]

Posts.	Mean strength.		Malarial diseases, total ratio.	
	1915	1914	1915	1914
Fort Moultrie, S. C.....	397	469	73.05	8.53
Jefferson Barracks, Mo.....	1,413	1,491	37.51	22.13
Washington Barracks, D. C.....	508	725	33.46	73.10
Fort Myer, Va.....	694	702	27.38	28.49
Fort D. A. Russell, Wyo.....	264	178	26.52	.....
Fort Sill, Okla.....	1,182	1,013	26.23	5.92
Fort Screven, Ga.....	444	503	22.52	13.92
Fort Leavenworth, Kans. (military prison).....	272	258	22.06	27.13
Fort Sam Houston, Tex.....	1,293	1,096	17.79	24.64
Fort Caswell, N. C.....	290	329	17.24	21.28

From the above table it will be noted that Washington Barracks, D. C., which had an admission rate in 1914 of 73.10, this year shows but 33.46 per 1,000, a remarkable reduction, due to the vigorous antimosquito campaign that is being waged where mosquitoes are prevalent. The excessive rate shown for Fort Moultrie, S. C., which is No. 1 on the list, is not enviable when compared with that for 1914, 8.53 per 1,000.

TUBERCULOSIS.

The following tabulation shows for the total American Army, and separately for the different countries where the Army has been stationed continually, the case rate for tuberculosis (all forms) for enlisted men for the last seven years. In this tabulation all readmissions during each year have been eliminated, so that the actual occurrence of tuberculosis (all) is shown:

Tuberculosis (all), enlisted men, case rates only.

Year.	United States.	Philippine Islands.	Alaska.	Hawaii.	Transports.	Panama.	China.	Total.
1915.....	2.68	6.42	1.31	3.62	5.34	6.12	5.24	3.52
1914.....	2.69	7.31	1.09	3.01	2.85	2.49	6.69	3.35
1913.....	3.07	6.70	1.75	4.24	4.37	3.76	3.29	3.66
1912.....	3.25	5.02	4.18	2.07	2.74	.....	.....	3.49
1911.....	3.64	3.77	2.68	1.99	1.76	.....	.....	3.55
1910.....	3.34	5.46	1.85	4.10	.80	.....	.....	3.65
1909.....	4.53	5.06	3.76	2.96	3.00	.....	.....	4.58

The above tabulation shows that for the year 1915 the rate for tuberculosis in the United States is lower than for any previous year recorded, being 2.68, as compared with 2.69 per 1,000 for 1914. The general rate for the American Army was 3.52, which is slightly higher than for the year 1914. All of the places shown in the tabulation have higher rates than for the United States, with the exception of Alaska, the rate for which is 1.31 per 1,000, as compared with 1.09 for 1914. The rate for the United States, when compared with former years, is encouragingly low, while, with the exception of the Philippine Islands and China, the other places show an increased rate, all of which exceed that for the American Army.

The following tabulation shows for the total American Army, and for those parts stationed in the United States and the Philippine Islands, the rates for tuberculosis (all) for discharges for disability, for deaths, and for noneffectiveness for the last four years:

	Year.	Discharged for disability.	Deaths.	Noneffective.
Army, American troops.....	1915	1.79	0.33	1.80
	1914	2.07	.47	1.77
	1913	2.26	.49	1.94
	1912	1.56	.31	1.40
American troops, United States.....	1915	1.67	.28	2.33
	1914	2.40	.47	2.23
	1913	2.16	.40	2.34
	1912	1.67	.27	1.65
American troops, Philippine Islands.....	1915	3.28	.50	.50
	1914	3.41	.28	.60
	1913	3.96	.79	.56
	1912	1.46	.57	.53

From a study of Table No. 21, giving the occurrence of tuberculosis at Army posts in the United States, Vancouver Barracks, Wash., after dropping down on the list to one case during 1914, has, as in the years 1913, 1912, and 1911, more cases of tuberculosis than any other station, with the single exception of Sam Houston, Tex., both having seven cases recorded for the year 1915.

Four more cases of this disease occurred than during the year 1914, although a reduction over 1913 of the same number of cases.

TABLE NO. 21.—*Tuberculosis (all) at Army stations, United States, continental (excluding Alaska), 1915, compared with 1914 and 1913, officers and enlisted men.*

	Admissions.					
	1915		1914		1913	
	Number.	Ratio per 1,000 of mean strength.	Number.	Ratio per 1,000 of mean strength.	Number.	Ratio per 1,000 of mean strength.
Vancouver Barracks, Wash.....	7	7.31	1	0.98	10	7.73
Fort Sam Houston, Tex.....	7	5.41	5	4.56	4	3.21
Fort H. G. Wright, N. Y.....	5	7.32	3	4.49	2	2.95
Fort Myer, Va.....	5	7.20	2	2.85	1	1.72
Fort Bliss, Tex.....	5	6.08	4	5.95	1	1.40
Letterman General Hospital, California....	4	21.39	5	26.60	2	10.87
Fort McDowell, Cal.....	4	4.59	1	.97	3	3.85
Presidio of San Francisco, Cal.....	4	3.66	8	6.41	4	2.15
Columbus Barracks, Ohio.....	4	3.43	5	3.31	5	4.22
Fort Slocum, N. Y.....	4	3.11	3	2.05	5	4.60
Jefferson Barracks, Mo.....	4	2.83	2	1.34	4	3.60
Fort Ontario, N. Y.....	3	12.88	.....	.....	1	3.65
Washington Barracks, D. C.....	3	5.91	.....	.....	2	2.97
Fort Adams, R. I.....	3	5.04	.....	.....	1	1.82
Plattsburg Barracks, N. Y.....	3	3.92	2	2.56	3	3.84
Fort Winfield Scott, Cal.....	3	2.73	.....	.....	2	2.15
Fort Monroe, Va.....	3	2.22	2	1.77	3	2.70
Walter Reed General Hospital, District of Columbia.....	2	14.81	6	42.86	3	32.26
General Hospital, Fort Bayard, N. Mex....	2	12.82	3	19.11	2	13.16
Fort Baker, Cal.....	2	6.51	3	11.76	1	3.39
Fort Sheridan, Ill.....	2	5.09	5	15.02	1	2.28
Fort Riley, Kans.....	2	4.22	3	4.57	1	.76
Fort Logan, Colo.....	2	3.50	3	4.62	1	1.71
Fort Hamilton, N. Y.....	2	3.18	2	3.28	4	7.30
Fort Worden, Wash.....	2	3.16	5	7.76	4	2.73
Fort Barrancas, Fla.....	2	3.14	1	1.62	.....	.....
Madison Barracks, N. Y.....	2	3.12	2	3.33	.....	.....
Fort Leavenworth, Kans.....	2	2.47	.....	.....	5	4.96
Fort Ethan Allen, Vt.....	2	2.30	1	1.07	3	4.62
Fort Wayne, Mich.....	1	58.82	.....	.....	.....	.....
General Hospital, Hot Springs, Ark.....	1	13.70	1	14.71	2	34.48
Fort Hunt, Va.....	1	7.87	.....	.....	1	8.85
Fort Mott, N. J.....	1	6.94	.....	.....	.....	.....
Fort Washington, Md.....	1	6.94	.....	.....	.....	.....
Fort Constitution, N. H.....	1	6.58	1	7.14	.....	.....
Fort Crockett, Tex.....	1	5.15	.....	.....	.....	.....
Fort Huachuca, Ariz.....	1	1.14	5	10.44	1	1.83
Fort Stevens, Oreg.....	.....	.....	4	11.40	1	2.29
Fort Niagara, N. Y.....	.....	.....	3	10.56	2	7.22
Fort McIntosh, Tex.....	1	2.61	3	6.91	4	10.50
Fort Moultrie, S. C.....	.....	.....	3	6.40	1	2.15
Fort McKinley, Mo.....	.....	.....	3	4.78	.....	.....
Presidio of Monterey, Cal.....	1	2.42	3	3.91	4	3.54
Fort Hancock, N. J.....	1	1.33	3	3.89	2	2.76
Fort Sill, Okla.....	1	.85	3	2.96	1	1.03
19 stations not included above had 1 case each in 1915.....	19	.....	.....	.....	.....	.....
4 stations not included above had 2 cases each in 1914.....	.....	.....	8	.....	.....	.....
13 stations not included above had 1 case each in 1914.....	.....	.....	13	.....	.....	.....
7 stations not included above had 2 cases each in 1913.....	.....	.....	.....	.....	14	.....
23 stations not included above had 1 case each in 1913.....	.....	.....	.....	.....	23	.....
Field miscellaneous, etc.....	53	.....	45	.....	49	.....
Total.....	179	2.68	175	2.72	183	3.07

TABLE NO. 22.—*Occurrence of tuberculosis (all) among American troops, Army, year 1915, by years of service, enlisted men.*

	Years of service.						Total.
	First.	Second.	Third.	Fourth.	Fifth.	Sixth and over.	
United States, continental (excluding Alaska):							
Mean strength.....							63,725
Admitted.....	48	31	17	22	10	43	171
Ratio per 1,000 of mean strength.....							2.68
Duty.....	5	2		4	1	2	14
Died.....	5	3			3	5	16
Discharged on certificate of disability.....	18	4	5	4	2	5	38
Otherwise.....	6	1	2			1	10
Remaining Dec. 31, 1915.....	14	21	10	14	4	30	93
Alaska:							
Mean strength.....							763
Admitted.....	1						1
Ratio per 1,000 of mean strength.....							1.31
Remaining Dec. 31, 1915.....	1						1
Philippines:							
Mean strength.....							11,824
Admitted.....	39	13	8	3	3	10	76
Ratio per 1,000 of mean strength.....							6.42
Duty.....	1	3				1	5
Died.....	4					2	6
Discharged on certificate of disability.....	19	2	2	1			24
Otherwise.....	1	1	2				4
Remaining Dec. 31, 1915.....	14	7	4	2	3	7	37
Hawaii:							
Mean strength.....							8,572
Admitted.....	10	9	8	1	1	2	31
Ratio per 1,000 of mean strength.....							3.62
Duty.....		1	1	1			3
Died.....			1				1
Discharged on certificate of disability.....		2				1	3
Remaining Dec. 31, 1915.....	10	6	6		1	1	24
Canal Zone, Panama:							
Mean strength.....							5,721
Admitted.....	10	7	6	3	1	8	35
Ratio per 1,000 of mean strength.....							6.12
Duty.....		1	1	1		1	4
Died.....	1	1					2
Discharged on certificate of disability.....		1			1	1	3
Remaining Dec. 31, 1915.....	9	4	5	2		6	26
China:							
Mean strength.....							1,335
Admitted.....	4	2				1	7
Ratio per 1,000 of mean strength.....							5.24
Duty.....	1						1
Died.....	1	1					2
Otherwise.....		1					1
Remaining Dec. 31, 1915.....	2					1	3
Transports:							
Mean strength.....							1,312
Admitted.....	4			1		2	7
Ratio per 1,000 of mean strength.....							5.34
Discharged on certificate of disability.....	4			1		1	6
Remaining Dec. 31, 1915.....						1	1
Total:							
Mean strength.....							93,262
Admitted.....	116	62	39	30	15	66	328
Ratio per 1,000 of mean strength.....							3.52
Duty.....	7	7	2	6	1	4	27
Died.....	11	5	1		3	7	27
Discharged on certificate of disability.....	41	9	7	6	3	8	74
Otherwise.....	7	3	4			1	15
Remaining Dec. 31, 1915.....	50	38	25	18	8	46	185

TABLE NO. 23.—*Undetermined fevers, 1915, by countries, officers and enlisted men, including Philippine Scouts and Porto Rican troops.*

Diseases.	United States (continental) excluding Alaska.	Alaska.	Hawaii.	Philippine Islands.	Canal Zone, Panama.	China.	Porto Rico.	Army transports.	Total.
Febricula.....	25	.....	5	27	.....	.....	2	.....	59
Fever, simple continued.....	8	.....	5	33	.....	1	.....	.....	47
Fever, type undetermined.....	72	1	1	30	2	11	3	.....	120
Ephemeral fever.....	5	.....	.....	.....	.....	.....	.....	.....	5
Total.....	110	1	11	90	2	12	5	.....	231
Ratio per 1,000 of mean strength	1.65	1.27	1.24	5.00	0.34	8.71	6.95	.....	2.22

From the above table it will be noted that the admission rate for these fevers in the United States was 1.65 per 1,000 of mean strength. The same rate for 1914 was 1.49, that for 1913 was 2.65, and for 1912, 1.94 per 1,000. China has the highest admission rate for this class of fevers, 8.71 per 1,000; Porto Rico comes next with 6.95 per 1,000. The rate for the United States alone is lower than the total rate for these fevers. It might be well to again state, as in previous reports that in questions of doubt, procedures are used in the laboratory diagnosis of typhoid and paratyphoid fevers so as to exclude any possibility of overlooking these two diseases.

MENTAL ALIENATION (ENLISTED MEN).

It is impracticable to compare the admission rate for this class of disturbances with the rate for diseases formerly classified and published under the term "insanity." The diseases included under the term "mental alienation" used in the present nomenclature, which was put into use January 1, 1912, include several conditions not taken into consideration under the term insanity, such as defective mental development, constitutional psychopathic state, hypochondriasis, and nostalgia. The case admission rate for mental alienation (all) for 1915 was 3.04 per 1,000, and the discharge rate 2.54, as compared with 3.83 per 1,000 for the admission rate and 3.02 for discharge rate during the year 1914. The admission and discharge rates for the entire Army for 1915 were 3.84 and 3.30 per 1,000, respectively.

ALCOHOLISM.

The admission rate for alcoholism in the United States for the year 1915 was 13.07 per 1,000, which is lower than for the preceding year, when it was 13.46. It is exceedingly gratifying to note that there has been a steady decrease in this rate since 1907, when the rate was 36.09, before which year there was a steady increase for eight years. The rate for 1915 is the lowest on record in the Army since the year 1870. As it has been stated before, the rates given are not representative of the true amount of intemperance existing in the Army, but as they are all calculated from similar data, i. e., the number of cases in which medical assistance intervenes, they are useful as indices of alcoholic excesses. There can be no doubt but that this remarkable decrease in the rates is properly attributable to the effect produced by the act of Congress in stopping the pay of officers and enlisted men when incapacitated for duty because of sickness due to drug addiction, alcoholism, or other misconduct.

Smallpox, 1915.

Rank and organization.	Age.	Station.	Date taken sick.	Date of successful vaccination.	Date of unsuccessful vaccination.	Disposition.	Length of service.	Date of enlistment.	Probable source of infection.	Previous attack.	Remarks.
Private, Company L, First Cavalry.	19	San Diego, Cal.	1915. Feb. 3	Oct. 26, 1914.	Feb. 3, 1915.....	Duty, Mar. 13, 1915.	3 months.	Oct. 26, 1914	From Mexican at San Diego, Cal.	None.....	
Sergeant, Battery B, Fifth Field Artillery.	28	Fort Sill, Okla.	Mar. 2		Jan. 2, 1911, Presidio of San Francisco, Cal. 1912 and 1914; no scars.	Duty, Mar. 22, 1915.	7 years....	Reenlisted Jan. 2, 1914.	Unknown.....	do.....	
Private, Company A, Nineteenth Infantry.	21	Cantonment hospital, Galveston, Tex.	July 4	acks, Mo.		Duty, July 29, 1915.	2 months..	May 11, 1915	St. Louis, Mo.	Yes.....	soldier's statement. Came in contact with native while detailed on mine plant-er.
Private, Ninety-fifth Company, Coast Artillery Corps.	25	Fort Mills, P. I.	Oct. 10	May 16, 1913, Jefferson Barracks, Mo.	None.....	Duty, Nov. 8, 1915.	24 years....	May 16, 1913	Detailed on mine planter; natives.	None.....	Has two vaccination scars.
Private, Company B, Porto Rican Regiment of Infantry.	20	San Juan, P. R.	Apr. 21	July 18, 1912, San Juan, P. R.	1906 and 1909; June, 1907; no result.	Duty, June 19, 1915.	74 years....	July 18, 1912	His laundress had smallpox, March, 1915.	Yes.....	

SMALLPOX.

Three cases of smallpox occurred within the United States proper during the year, making an admission rate of 0.05, with no deaths.

MEASLES.

During the year 1915, 555 cases of measles occurred in the Army in the United States, with 20 deaths and 8 discharges. In 1914 there were 448 cases, with 8 deaths and 1 discharge.

An epidemic during January, February, March, April, and May at Jefferson Barracks, Mo., resulted in 147 cases being reported, while at Columbus Barracks, Ohio, during February, 60 admissions for measles are recorded, with 6 and 10 deaths, respectively. Of the 147 cases at Jefferson Barracks, 56 occurred during the month of January and 50 during the month of March. The depots having the next highest number of admissions for the year were Fort McDowell, Cal., with 27 cases and no deaths, and Fort Logan, Colo., with 26 cases and 1 death. The mean strengths during the year at the above-mentioned recruit depots were: Jefferson Barracks, 1,391; Columbus Barracks, 1,143; Fort McDowell, 854; and Fort Logan, 553.

The diversion of accepted applicants to other stations resulted in the disease assuming no greater proportions than shown at Columbus Barracks. With the advent of milder weather the change in habitat from the barracks to out-of-door life usually marks a decline in the incidence of the disease, which would tend to bear out the contention that crowding is a very material factor in the spread of this disease.

This office renews its recommendation that either additional barrack room be provided or that the number of accepted applicants sent to the recruit depots be curtailed, in order that an epidemic such as threatened at Columbus and Jefferson Barracks might be averted. The continuance of an epidemic is in the main attributable to contact of nonimmunes with infected cases before the latter have shown any symptoms. That the death rate was not higher for the year 1915 is directly due to the response on the part of The Adjutant General to recommendations of this office for the removal to other quarters of the majority of the personnel before the disease had assumed greater proportions than the figures above given would indicate.

EPIDEMIC POLIOMYELITIS.

No cases of this disease occurred among soldiers or civilian employees of the Army or among the families resident in the various garrisons. During the past year, however, poliomyelitis appeared in the vicinity of several of the larger military reservations in the eastern United States, notably at Highland Falls, N. Y., immediately adjoining the United States Military Academy Reservation at West Point, N. Y. Nineteen cases with five deaths occurred. Stringent quarantine measures were promptly and successfully put in operation by the academy authorities upon the recommendation of the surgeon. These measures were as follows:

The following quarantine regulations with reference to poliomyelitis are established:

1. Children under 16 years of age residing at West Point will not be permitted to leave the reservation. Children under 16 years of age residing elsewhere will not be permitted to enter the reservation.
2. All general pleasure travel to and from West Point is discontinued.
3. Guests of individuals residing at West Point and guests of the hotel to be authorized to visit the reservation by permit only. Upon arrival at West Point they will be held pending investigation and issuance of permit if warranted.

4. Travel to and from West Point on business to be by permit only. Those coming to West Point will be held at point of entrance until necessary investigation is made and permit issued.

5. All soldiers of the garrison at West Point will be quartered on reservation and will not be allowed to leave the reservation during the continuance of the quarantine.

6. Classified civilian employees to be permitted to enter and leave the reservation by permit only.

7. Employees of the West Point Army mess and cadet mess will, as far as practicable, be quartered on the reservation, and others not so quartered will enter and leave the reservation by permit only.

8. Tailors and similar employees of the cadet store will enter the reservation at the railroad station or south gate and will proceed directly to the cadet store, and when through with their work at that place will leave the reservation by the most direct route.

9. All servants employed on the reservation will be required to live thereon and will not be permitted to pass back and forth from the reservation.

10. Laundresses will assemble at the south gate at the time specified by the officer in charge of the cadet laundry and will there be transported by wagons to the laundry. Upon completion of their work at the laundry, they will be transported back to the south gate. They will not be permitted to pass back and forth on foot through the reservation.

11. General laborers employed under the quartermaster will assemble at the south gate and be conducted by a noncommissioned officer to their work. Upon completion of their work they will again be assembled and conducted back to the south gate.

12. The vending of food products of any kind on the reservation is prohibited. Vegetable, fruit, bakery, and butcher wagons will not be permitted to enter the reservation.

13. In all cases not covered by the above, entrance to and departure from the reservation will be by special permit only, to be issued from these headquarters.

14. All persons residing on the reservation or who may be employed on the reservation will at once notify the surgeon of any suspicious case of illness occurring in their families or in the same house in which they reside.

15. The above measures are adopted as necessary for the health of those resident or employed at West Point.

CEREBROSPINAL MENINGITIS.

Twenty-three cases of this disease, with 9 deaths, occurred during the year 1915 in the United States. In 1914 there were 14 cases with 5 deaths.

INFLUENCE OF STATION.

The posts having the highest admission rates, from all causes, were: Forts D. A. Russell, Wyo., with a rate of 1,303.03; Caswell, N. C., with a rate of 955.17; George Wright, Wash., 943.61; Leavenworth, Kans., 930.95; and Myer, Va., 880.40.

The posts having the highest noneffective rate for the year 1915 were: Forts Bliss, Tex.; Sam Houston, Tex.; D. A. Russell, Wyo.; Huachuca, Ariz.; and Sheridan, Ill., in the order named. The rates from all causes were 95.24, 77.63, 37.86, 34.91, and 25.43 per 1,000, respectively. The average number of days' treatment for each case was as follows: Fort Bliss, 43.68; Fort Sam Houston, 35.68; Fort D. A. Russell, 10.60; Fort Huachuca, 39.12; and Fort Sheridan, 11.65.

The five posts having the lowest admission rate, from all causes, during the year, were: Forts Casey, Wash., 190.62; Yellowstone, Wyo., 261.90; Stevens, Oreg., 294.57; Winfield Scott, Cal., 330.60; and West Point, N. Y., with 343.68 per 1,000.

The posts having the lowest noneffective rates, from all causes, with their rates, were: Forts Preble, Me., 3.96; Hamilton, N. Y., 5.90; Yellowstone, Wyo., 6.06; West Point, N. Y., 7.16; and Alcatraz

Island, Cal., 8.63 per 1,000. The average number of days' treatment for each case was: 4.15, 5.53, 8.44, 7.60, and 7.90, respectively.

Of the recruiting depots Fort Slocum, N. Y., had the highest admission rate from all causes, 1,341.10, and Jefferson Barracks, Mo., the lowest, 815.99 per 1,000; the latter depot had the highest average number of days' treatment for each case, 15.52. Fort Slocum had the highest noneffective rate from all causes, 38.64 per 1,000, and Fort McDowell, Cal., the lowest, 11.12. The highest death rate occurred at Jefferson Barracks, Mo., being 14.86 per 1,000, and the lowest at Fort McDowell, Cal., 1.15.

The Western Department, as last year, had the lowest admission rate, 556.47 per 1,000, as compared with 437.09 for 1914, with the exception of the independent stations, which had a rate of 508.43 per 1,000, as compared with 579.81 per 1,000 for 1914. A considerable increase is noted in the Eastern Department, whose rate for 1915 was 654.32, as compared with 567.44 per 1,000 for 1914. The rate for the recruit depots, while still high, is slightly lower than for 1914, being 1,070.17 for 1915, as compared with 1,087.43 per 1,000 for 1914.

The independent stations had the lowest noneffective rate, 10.46 per 1,000, for the year 1915, as compared with 11.18 for the Western Department, 12.72 for the Mexican border, and 16.21 for the Eastern Department.

The Central Department had the lowest death rate, 2.29 per 1,000 for 1915, as compared with 7.97 for 1914, and the Western and Eastern Departments and the Mexican border next in order with 6.26, 6.28, and 6.33 per 1,000, respectively.

Tables Nos. 24 and 25 show the posts having the highest and the lowest ratios of admission and noneffectiveness in the United States as a whole.

INFLUENCE OF RACE.

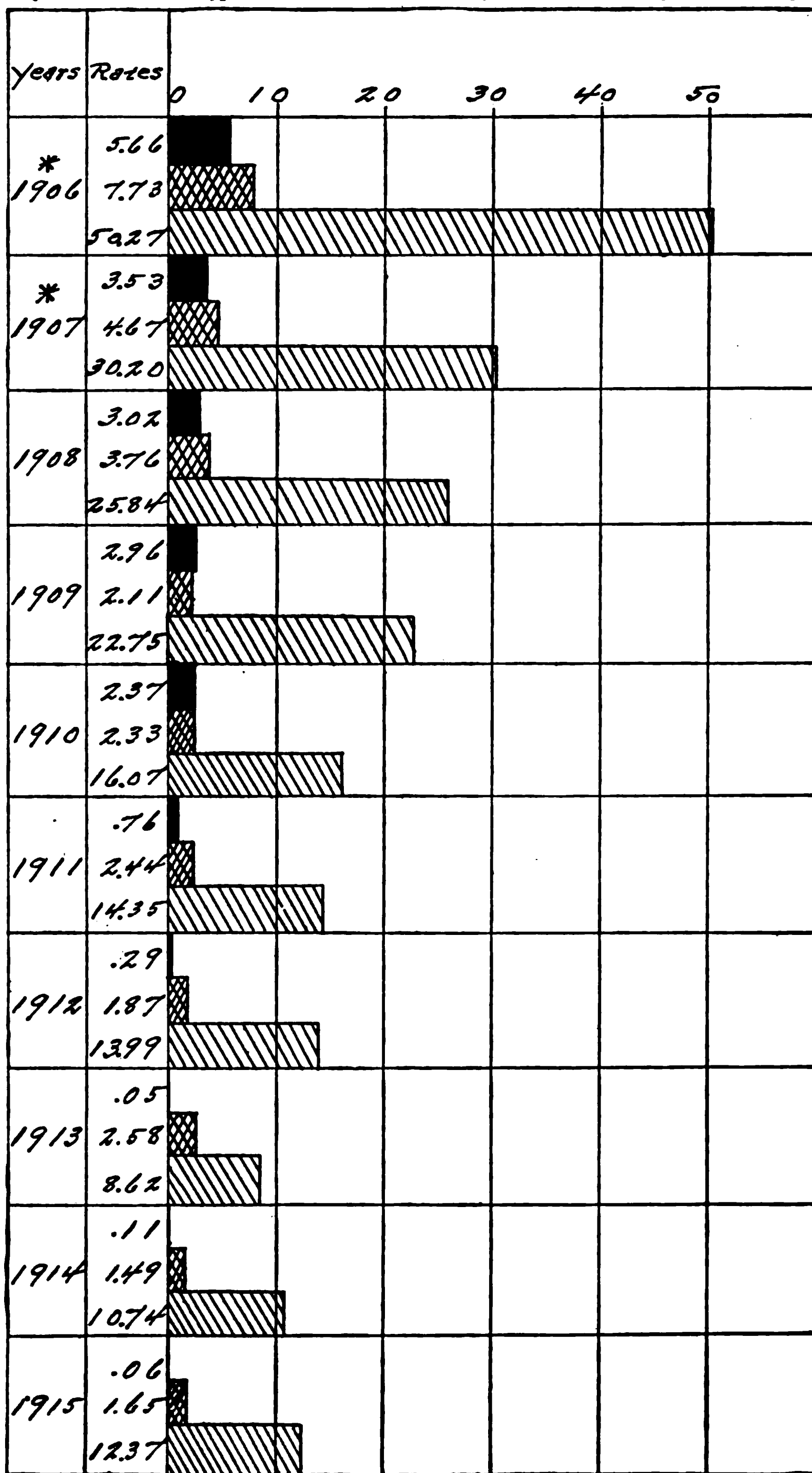
The colored troops (enlisted) had higher rates than the white for noneffective and discharges, being 31.26 and 22.96, as compared with 25.52 and 13.23 per 1,000, respectively, for 1915. The respective rates for 1914 were 33.73 and 27.90 as compared with 23.05 and 14.42. The admission rate for white troops was higher than for the colored, being 708.51 as compared with 590.81.

For venereal diseases the admission rate for the white troops was 84.08, and for the colored 71.75 per 1,000 for 1915; for alcoholism the rate for the white troops was 13.49, and for the colored, 2.46; for tuberculosis (all kinds) for the white was 2.72 and for the colored, 1.64; for bronchitis the rate for white was 37.07, and for colored, 33.21; for diarrhea and enteritis the rate for white was 32.12, and for colored, 35.26; and for tonsilitis, acute follicular, the rate for white was 52.18, and for colored, 21.32.

The relative prevalence of the other diseases in the two races with comparisons are shown in Table No. 7.

Chart R.—United States. Officers and men.

[Admission rates for typhoid fever, undetermined fever, and malarial fevers, years 1906-1915.]



Typhoid Fever ■ Undetermined Fevers ▨ Malaria ▧

* Excluded men

* Officers not included

Chart 8.—United States. Enlisted men.

[Admission rates for syphilis, chancroid, gonorrhea, and total venereal, years 1906-1915.]



Syphilis Chancroid Gonorrhea Total Venereal

* Readmitted cases deducted to correspond with figures for years preceding 1906, and 1913 to 1915.

Chart T.—United States. Enlisted men.
(Admission rates for venereal diseases and alcoholism, years 1906-1915.)

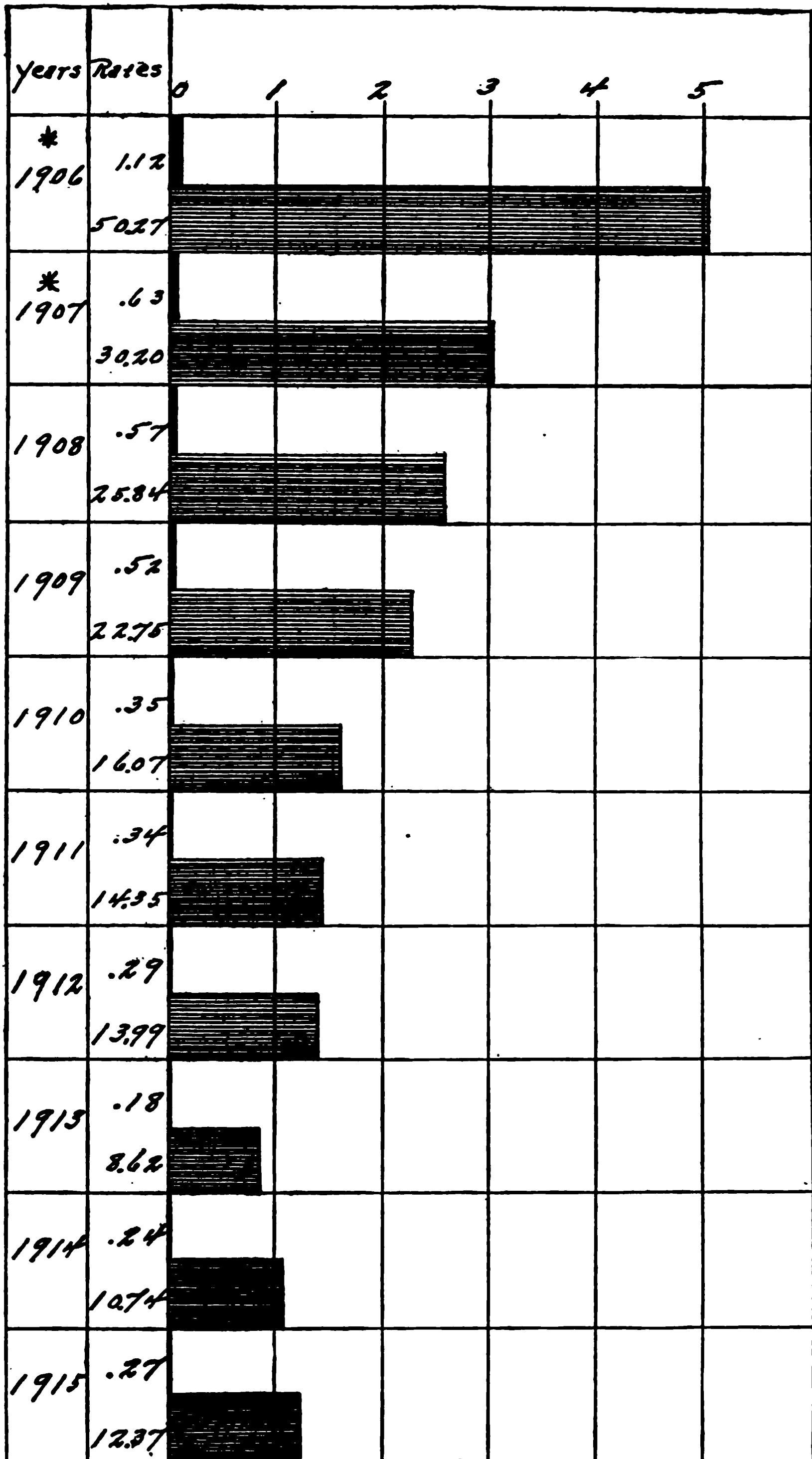
<i>Years.</i>	<i>Rates.</i>
* 1906	32 144
* 1907	36 149
* 1908	30 155
* 1909	25 151
* 1910	24 138
* 1911	18 145
1912	17 116
1913	14 86
1914	13 90
1915	13 84

Venereal Diseases

Alcoholism

* Readmitted cases denoted to correspond with figures for years preceding 1906, and 1913 to 1915.

Chart U.—United States. Officers and men.
 [Admission and noneffective rates for malarial fevers, years 1906-1915.]



Admissions  Noneffective 
 * Officers not included

Chart V.—Army. Officers and American and native troops.
[Admission and death rates for tuberculosis, years 1906-1915.]

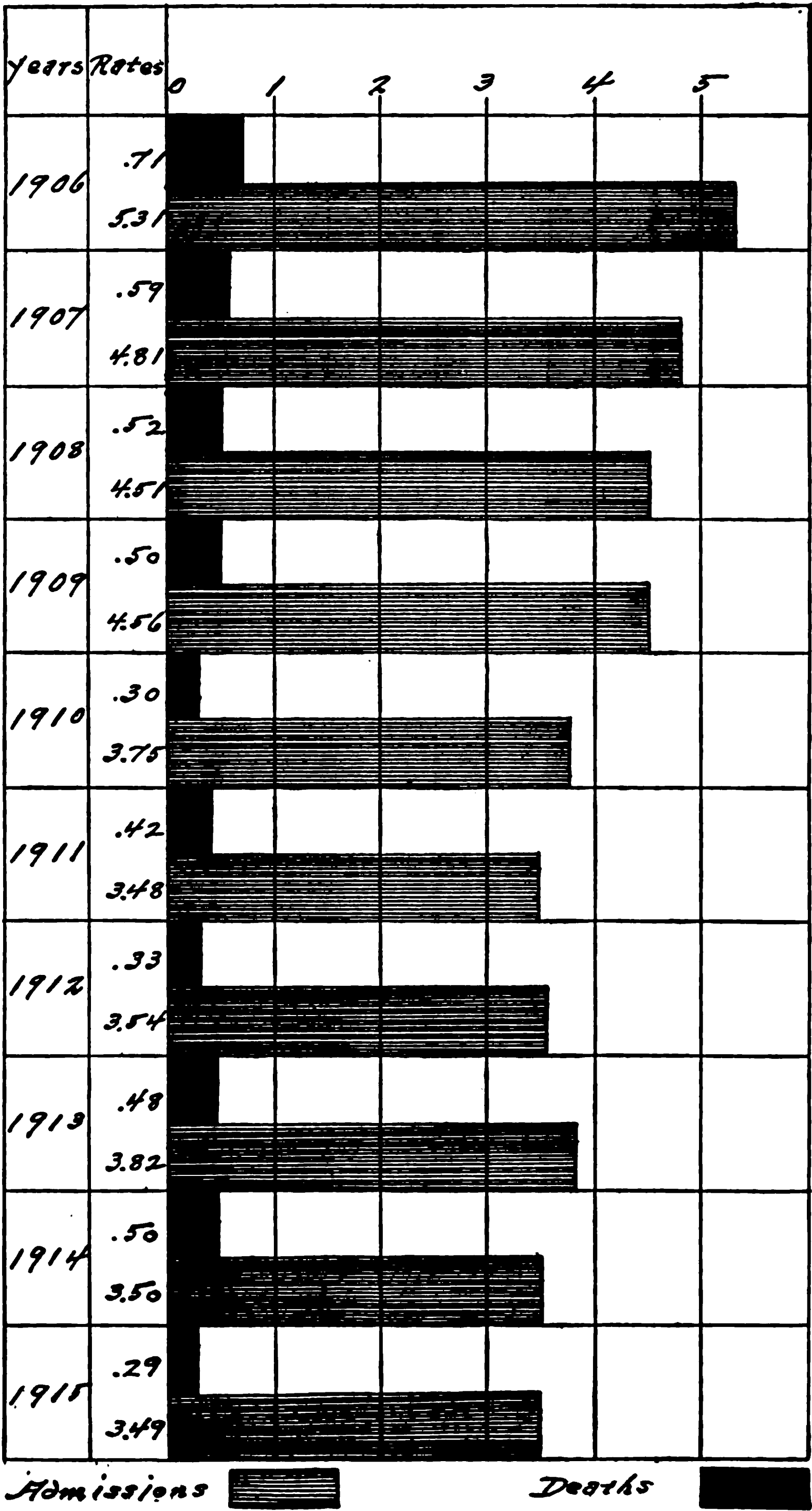


TABLE No. 26.—*Influence of disease on enlisted men, American troops, serving in the United States, by arms of service, for year 1915.*

Arms of service.	Mean strength.	Admitted.	Discharged on certificate of disability.	Died.	Constantly noneffective.	Ratio per 1,000 of mean strength.			
						Admitted.	Discharged on certificate of disability.	Died.	Constantly noneffective.
Infantry.....	16,570	9,807	210	41	380.00	591.85	12.49	2.44	22.93
Cavalry.....	11,703	6,323	110	26	227.18	540.29	9.26	2.19	19.41
Coast Artillery.....	15,057	7,797	188	44	288.91	517.83	12.31	2.88	19.19
Field Artillery.....	3,707	2,586	48	8	91.27	697.60	12.77	2.13	24.62
Engineers.....	1,262	825	13	4	41.89	653.72	10.16	3.12	33.19
Ordnance.....	647	271	.....	4	8.27	418.86	.....	6.10	12.78
Signal Corps.....	843	393	5	4	17.90	466.19	5.85	4.68	21.23
Hospital Corps.....	2,898	1,507	46	7	57.18	520.01	15.65	2.38	19.73
All others.....	11,038	6,463	151	55	217.18	585.52	13.49	4.91	19.67
Total.....	63,725	35,972	771	193	1,329.77	564.49	11.93	2.99	20.87

TABLE No. 27.—*Influence of season, United States, continental (excluding Alaska), year 1915, officers and enlisted men.*

Month.	Mean strength.	Ratios per 1,000 of mean strength.									Prevalling diseases (exclusive of venereal diseases, vaccinia, alcoholism, and injuries).
		All causes.						Exclusive of venereal diseases, alcoholism, vaccinia, and injuries.			
		Admissions.		Deaths.	Non-effective.		Admissions.	Deaths.	Noneffective.		
		Total.	Hospital.		Total.	Hospital.					
January.....	68,914	61.02	45.12	0.34	24.76	21.09	41.14	0.24	16.24	Tonsillitis, 520; acute bronchitis, 321; influenza, 202.	
February...	69,958	64.77	47.92	.49	26.99	22.99	47.99	.32	18.95	Influenza, 500; tonsillitis, 491; acute bronchitis, 299.	
March.....	69,114	71.65	51.80	.49	28.50	24.21	52.55	.35	20.27	Influenza, 523; tonsillitis, 483; acute bronchitis, 340.	
April.....	68,117	61.57	42.84	.45	27.95	23.01	42.36	.32	19.35	Tonsillitis, 380; influenza, 280; acute bronchitis, 198.	
May.....	66,684	52.82	36.73	.27	25.30	21.20	32.22	.18	16.58	Tonsillitis, 216; Acute bronchitis, 109; furuncles, 102.	
June.....	66,291	49.00	33.40	.37	24.23	20.80	29.79	.18	15.48	Tonsillitis, 177; furuncles, 125; malaria, 84.	
July.....	65,563	53.84	36.65	.34	24.16	20.20	32.96	.13	15.56	Tonsillitis, 156; furuncles, 125; constipation, 112.	
August.....	63,752	51.90	37.10	.69	24.78	21.17	31.12	.12	15.59	Tonsillitis, 132; furuncles, 116; acute, bronchitis, 108.	
September..	65,480	52.93	37.87	.39	24.61	20.63	33.61	.22	15.32	Gastro-enteritis, 144; tonsillitis, 134; intestinal fermentations, 133.	
October.....	64,782	52.58	36.43	.53	24.74	20.77	33.77	.24	15.21	Tonsillitis, 142; gastro-enteritis, 140; acute bronchitis, 139.	
November..	65,771	57.44	26.80	.41	25.78	21.61	36.26	.16	15.67	Influenza, 281; acute bronchitis, 232; tonsillitis, 198.	
December...	67,088	64.84	45.14	.55	27.32	22.64	45.62	.35	16.92	Imfluenza, 830; acute bronchitis, 351; tonsillitis, 284.	
Total.	66,789	606.04	493.14	5.31	25.77	21.70	461.29	2.83	16.78	Tonsillitis, 3,213; influenza, 2,919; acute bronchitis, 2,414.	

SANITATION, UNITED STATES.

The general sanitary conditions throughout the United States for the Army have been very satisfactory. Such defects as were reported were of a minor character and were promptly remedied through the cooperation of those in authority. At several of the newer posts in the Canal Zone complaints have reached the office in regard to the absence of screening against mosquitoes. Unfortunately it has not been possible to make corrections in all cases through a lack of appropriation of funds.

The department surgeon, Eastern Department, under the subject of hospital treatment in the Canal Zone, remarks:

I desire to invite attention to the unsatisfactory condition in the matter of hospital treatment in the Canal Zone for those in the military service, and more particularly for the dependent members of their families, who are accorded the privilege of hospital treatment, subject to a charge for subsistence and medicines, everywhere else in the service where troops are serving and the facilities exist, except in this district. Aside from the hardship just mentioned, I consider the present arrangement, whereby all the sick of the service are sent to the Canal Zone hospitals except those requiring dispensary treatment only, and by which the medical officers there on duty are deprived in large part of the care of the sick and in whole of the professional work and administration of hospitals, as tending to the deterioration of the efficiency and morale of the medical officers concerned. In my opinion, the restoration to the Medical Corps of its proper function of the care and control of all military sick, by the establishment of military hospitals in the Canal Zone on exactly the same basis as elsewhere in the Army, is the most important medico-military matter in this department.

On the subject of sanitary inspections, he further remarks:

No sanitary inspections were made during the year. The War Department under date of July 8, 1915, decided that "Such general inspections except for troops in the field in large camps should be made as a rule by officers of the Inspector General's Department, that inspections by sanitary inspectors should be limited to special cases requiring unusually detailed and careful inspection of a more or less technical character," etc. A great part of the work of the sanitary inspector is of a technical nature, and no other inspector is capable of giving such expert information to the department commander or the Surgeon General, who are by these inspections kept fully informed as to the proficiency of the personnel, care of the sick, sanitary conditions and health of the troops, not to speak of the inestimable disciplinary value that accrues to the medical personnel of the various posts from a knowledge that searching technical inspections will be made each year of all things pertaining to the Medical Department by an official sanitary inspector. As a matter of fact, the sanitary inspector was called upon to take over the inspections previously made by the department surgeon, who was required by regulations, ever since the Civil War, to inspect every post in his department at least once a year.

Further he states:

In the matter of winter armory inspections by medical officers, the fact that there have been assigned to districts five medical inspector-instructors, has improved the situation very much, so far as the post surgeons are concerned, it having been necessary to recommend very few details for this duty. But in regard to the summer encampments, where the services of a medical inspector-instructor are required for every organization which has attached to it sanitary personnel, the department was put to it to find officers available at the times and places required. In the vicinity of Boston, last summer, there were six different encampments of the Massachusetts Volunteer Militia at different places at the same time. The encampment of United States troops at Plattsburg, to which students and business men were invited, lasting, as it did,

more than three months, required the services of a number of medical officers in addition to those serving at Plattsburg Barracks. The situation was such that it was necessary to recall the sanitary inspector from leave and send him up to Plattsburg Barracks to administer the hospital at that post.

In commenting upon the sanitary conditions in that department during the year, the department surgeon, Western Department, states:

The sanitary conditions throughout the department for the year were very good. A few defects were noted on the monthly reports, and where possible were promptly corrected. The following is deemed worthy of special note:

The water supply for the Presidio of San Francisco, Fort Winfield Scott, the Letterman General Hospital, Fort Mason, and the transport docks, is obtained from a small stream that arises from springs on the Presidio Reservation and flows a short course near the southern boundary of the reservation to the sea. There are many buildings just outside the reservation and the slope of the creek is abrupt and such that contamination by drainage from the adjacent streets and buildings and leaking sewers is always a possibility. At the pumping station the water is subjected to rapid mechanical filtration, with the addition of a coagulant, and the laboratory findings of the filtered water have been satisfactory; but the dam is wooden and in bad order and the sediment tank is too small to perform its function. Recommendations have been made that a concrete dam and two sediment tanks be built, and the item has been included in the 1917 estimate to Congress. As the large number supplied with water from this plant, and the liability of the supply to contamination makes it important that the filtration plant should be kept in the highest state of efficiency, it is believed that the work recommended is of considerable importance.

The surgeon at Vancouver Barracks reported the water supply endangered by a cesspool in use within 75 yards of the wells. A requisition for the construction of a septic tank for the disposal of this sewage was forwarded to the War Department "approval recommended" under date of November 30, 1915.

The surgeon, Presidio of Monterey, Cal., recommended in the sanitary report for December, 1914, the "Extension of existing barrack buildings to provide sufficient squad rooms to give at least 60 square feet floor space to every man; the installation of an adequate heating and ventilating system in all barracks; the installation of modern plumbing (water-closets and urinals) and adequate hot water system for bath rooms; connection of barracks to bath rooms by covered passage." The foregoing has been the subject of considerable correspondence, and the present status is that estimates for this construction (as modified in the office of the Quartermaster General) were to be included in the estimate for the fiscal year 1917.

The department surgeon, Central Department, in his annual report for the calendar year 1915, states:

All conditions were cheerfully met and the duties required of the medical officers were satisfactorily performed, no complaint being received as to unsatisfactory or inadequate service. The service of the medical officers assigned as locum tenens at posts was also satisfactory.

Speaking of the venereal situation in the department, the surgeon at Fort Leavenworth is quoted as follows:

The venereal rate has been somewhat above the average for the Army. Care has been taken to make every provision for the convenience, comfort, and privacy of the men who come to the hospital under the provisions of G. O. 17, W. D., 1912, for the cleansing and disinfecting treatment prescribed. A man of the Hospital Corps detachment is on duty at all hours of the day and night to supervise the procedure. The medical officers also take occasion to point out to the men the importance of this sanitary precaution for those who will expose themselves.

A wide difference exists between the various organizations as regards the carrying out of the provisions of G. O. 17, W. D., 1912, and it is believed that this has direct relation to the amount of interest which the company officers take in the matter. The success of some officers in educating their men to take this sanitary precaution shows that all could achieve a reasonable amount of success by earnest and persistent efforts. It is believed that in the case of company officers who fail to attain a reasonable amount of success in the matter the fact should be noted on their efficiency reports by commanding officers under the heading of remarks.

Regarding sanitation, the department surgeon adds:

The posts in this department, all with garrisons depleted by the departure of the Second Division to the southern border, nearly three years since, have, as a rule, all been caring for themselves, with more or less difficulty, owing to their shortage of personnel.

The annual reports concerning sanitation from all posts are usually brief, expressing satisfaction, and there is no reason to suppose that there are any sanitary questions in the department of real urgency.

The following conditions, however, have existed for several years, during which complaints have come from Forts Leavenworth and Brady of a smoke nuisance from the use of soft coal, with recommendations for the substitution of hard coal. The greatly increased expense of such a change has, however, militated against its adoption.

At Fort Russell the completion of the new post city water-supply plant is expected within a few weeks, which will permit the use of city water with confidence. This will apparently terminate an agitation for pure water lasting for years.

At Fort Meade the damming up of the post sewer at terminus into Bear Butte Creek has for years prompted recommendations for the construction of a septic tank.

The sanitary conditions, as reported by the department surgeon, Southern Department, have been generally good. The men are well protected from weather. Suitable buildings were erected for the kitchens and mess halls and they have been effectively floored and screened. Latrines are boxed and fly proof. Lime and flytraps are supplied latrines. Kitchen wastes and manure are usually carted away daily by outlying farmers. Habits of men are, as a rule, very good. Food supply and preparation are satisfactory.

In speaking of the preventable diseases with which they have to contend on the southern border, the department surgeon remarks:

War and famine have paved the way for typhoid fever, smallpox, typhus fever, and influenza in severe forms, and these epidemic diseases have all prevailed in Mexico and among the refugees who have flocked to this side of the border. The fact that smallpox has been limited to two cases, typhoid fever to two, and epidemic meningitis to one show how splendidly under control are these diseases, which formerly caused such morbidity and mortality.

Further, he adds:

The prevailing diseases have been gastrointestinal, bronchial, and venereal. Acute follicular tonsillitis and influenza have prevailed extensively during the colder months, especially at Douglas, Ariz. They seem connected, in their mode of spread, with poor ventilation in the tents of the men and in the various moving-picture shows frequented by the commands. Improvement has followed a greater care in seeing that the tents are properly aired during the day and ventilated at night. The proprietors of the various picture theaters have likewise cooperated to improve their ventilation.

There were relatively a large number of cases of diphtheria. Twelve of these cases occurred at Fort McIntosh from January 6 to May 3. The usual methods of isolation, careful bacteriological examinations of throats, and immunization of contacts with antitoxin kept the disease well in check. The majority of cases seem to have been contracted in Laredo, where an epidemic prevailed during the spring.

In explanation of the high rate of venereal diseases it is stated:

It is partly due to the soldiers obtaining 24-hour passes and failing to take the prophylactic treatment soon enough after exposure to be of much value. For such as these, and especially for the use of troops serving on the border and on detached service, where the usual prophylactic can not be given, it is recommended that the prophylactic tubes formerly authorized be again issued.

Continuing on this subject of venereal disease, the following is quoted from the report of the surgeon, Fourth Infantry, Brownsville, Tex.:

At Brownsville the usual factors are: (a) The small number of prostitutes present in a small town; (b) the exceedingly low grade of those who are here. Cause: (a) Operates by the whole number of women becoming more rapidly diseased than in a

larger town and increasing the chances of contagion. Light is shed as to the grade of these women by the fact that pediculosis pubis is exceedingly prevalent in the command, as many as eight cases having been found in one company at the semimonthly physical inspection. The large majority of these women are Mexican-Indians, which fact needs no further comment as to their hygienic condition.

The large number of prophylactic treatments given indicates a general knowledge of the importance of the measures and would give ground to expect a small venereal rate were it not for the well-known means of circumventing the order or of partial compliance that is sufficient to avoid legal penalties but not sufficient for therapeutic benefit. All cases of venereal exposure without venereal prophylaxis, where the facts could be established, have been tried by summary court-martial. There have been 17 convictions for this offense during the year.

The surgeon, Twelfth Infantry, Camp Stephen Little, Nogales, Ariz., contributes the following on the subject:

This station can point with pride to the unusually low venereal rate for the year, which could only have been secured through the system of venereal prophylaxis in use. During the year there were recorded 5,401 prophylactic treatments, an average of 450 per month. These figures show the great extent to which the men have been exposed to venereal disease. Prostitution in this vicinity is not regulated and most of the prostitutes are Mexican women who loiter in the vicinity of the camp. Undoubtedly a very favorable influence in reducing the number of venereal infections has been the absence of saloons in the town of Nogales. A sober soldier after exposure to venereal disease resorts to the prophylaxis and properly carries out the treatment, but a venery associated with drunkenness is a serious menace to an individual's health and undoubtedly is the cause of so-called failures of our venereal prophylaxis.

The following, quoted from the report of the surgeon, Eighteenth Infantry, Douglas, Ariz., has the approval of the department surgeon:

When cases are transferred to other hospitals their subsequent history under present methods is unknown to the medical officers who cared for patients originally. It would increase the interest in following cases, and be very instructive, if some method could be instituted of reporting changes in diagnosis, complications, and final disposition of these patients to the officers who have formerly treated them.

The surgeon, Fort Sam Houston, Tex., in his report to the department surgeon, submits the following on "Patients refusing operations:"

The service on the border is not attractive, and as a result many men take advantage of every opportunity to leave the Army by discharge. In my opinion this accounts for the many refusals to undergo operations to render the patient fit for the military service. I am keeping a list of these refusals, and at the proper time will forward it to The Adjutant General of the Army, with remarks, with a view of having the present privilege of refusing operations revised.

The surgeon, Sixth Cavalry, which was stationed at Harlingen, Tex., reports the following:

Skin and subcutaneous affections.—There has been a great number of sores, boils, abscesses, and ulcers with adenitis and lymphadenitis from infection. The prevalence with which slight scratches became spreading sores, which resist or at least require treatment over a long period, leads one to consider infection from some parasitic fungi. Abrasions from thorns, as well as bites from sand fleas and ticks, common to this section, could easily promote this infection. Tropical ulcers are in some cases simulated.

Intestinal disturbances.—Quite a number of cases of acute dysentery have been seen. These vary in severity, but have run a fairly similar course, characterized by fever and rapid onset and diarrhea of varying severity, but often with blood and mucus. They have responded rather quickly to treatment, and it is believed to be a bacillary dysentery. No amoebic cases have been observed, except one with a past history.

Malaria and fevers undiagnosed.—There have been a few cases of malaria of the type plasmodium vivax diagnosed, and more called malaria, but the disadvantages of not having a microscope, and the habit of the corps men on duty with the troops on the river of giving quinine has precluded diagnosis in these cases, but I believe malarial infection in this section to be a negligible factor. There have been, however, quite a number of cases of fever type undetermined. These were characterized by rapid onset, with or without diarrhea, quite high and continuous fever lasting three or four days,

and rapid recovery. With the coming of cooler weather and fewer insects, this affection seems to have lessened or disappeared.

Sanitation.—The troops at the outlying stations are for the most part in tents and have been supplied lumber for floors and kitchens. They depend upon such water as the community affords, as wells, rivers, or small lakes, and each troop is supplied with a Lyster bag. The remainder of the regiment at Harlingen is well camped and supplied with water from the town waterworks, and with electric lights. Tents are floored and kitchens screened. Deep-pit latrines are used and are satisfactory. Flies were very numerous during the warm weather, but few remained after December 1, 1915. Mosquitoes at no time have been troublesome, and these mostly of the *Culex* type. It has, however, been very dry since the troops arrived and all standing water in the vicinity of camp has been oiled. The climate since October 1 has been ideal, and it is believed the men are reasonably content. The splendid shooting has afforded the chief amusement. The outlying troops have depended largely upon Hospital Corps men for medical attendance, and the necessity of reliable men for the corps has been most apparent, and that they should have sufficient training. An automobile ambulance was asked for shortly after the troops arrived in Harlingen, and was approved but never supplied. It would have been most useful, and the scattered troops could have been much more easily and effectively cared for. The ambulance company has supplied service only within the town, whereas an automobile ambulance could have collected the sick and wounded over most of the district.

CAMP SANITATION.

This subject has been one of unusual importance and interest during the past year.

The camps of instruction for civilians at Plattsburg and elsewhere, the assembling of the State troops in camps of mobilization, and the muster in to the Federal service of 140,000 National Guard in June, 1916, have necessitated a thorough consideration of all measures relating to the care of troops in the field.

The following circular relating to camp sanitation and personal hygiene, prepared by the Surgeon General of the Army, was early sent to The Adjutant General with a view to its publication for the information and guidance of all concerned.

With slight modification this circular has been approved and issued as a general sanitary order of the War Department.

As will be noted, this order embodies largely those methods which the experience of the regular troops in their camps at Vera Cruz, Galveston, Texas City, San Antonio, and other places on the border and in Mexico proved to be most valuable and satisfactory for field conditions.

The following sanitary regulations are published for the guidance of all concerned and should be strictly enforced:

1. *Chief surgeon.*—The chief or division surgeon is charged with the general conduct and supervision of the Medical Department in the performance of its duties, and will make such assignment of personnel as may be required.

2. *Sanitary inspector.*—The sanitary inspector is charged especially with the supervision of the sanitation of the camp. It is the duty of commanders to remedy defects reported to them by the inspector.

3. *Water supply.*—Precaution must be taken to prevent contamination of the camp water supply by keeping all containers scrupulously clean and protected from dust and other sources of infection.

An appliance designed by Maj. William J. Lyster, Medical Corps, and carried on the supply table as "Water bag, field, sterilizing," consists of a canvas bag of specially woven flax, 20 inches in diameter and 28 inches in length, sewn to a flat galvanized-iron ring, hinged so it folds at one diameter. Spliced at four equi-distant points on the ring are two crossed pieces of hemp rope, enabling the bag to be suspended on any convenient support capable of holding the weight of the bag when filled with water, which is about 330 pounds. Five nickel spring faucets are placed at equal spaces about the bottom edge of the bag. The neck of these faucets is small enough

to enter a canteen which can be filled in 10 seconds. The self-closing faucets prevent wastage.

The purpose of the bag is not for transporting water, but to provide a stationary receptacle in which water can be held long enough to sterilize and then distribute it. The empty bag weighs from 7 to 7½ pounds and folds into a convenient package for carriage in the field. It thus can be carried by the soldier on the infantry pack when other transportation is wanting.

After the bag is suspended and filled with water, it is sterilized by the addition of a small amount of hypochlorite of calcium. This is carried in measured doses, sealed in glass tubes. A package of 60 of these tubes weighs 10 ounces and measures 7½ by 3½ by 4½ inches. Packed in corrugated paper it will stand rough usage.

The tubes themselves are 3 inches in length by three-fifths of an inch in diameter and are marked with a file enabling them to be easily broken in the fingers without fragments. They contain from 14 to 15 grains of calcium hypochlorite. This chemical contains from 30 to 32 per cent chlorin, which forms in the water hypochlorous acid and results in sterilizing the water. The process is one of oxidation. In the strength used waters highly infected are rendered safe. Of course, in such strengths (1-500,000) grossly polluted water such as sewage will not be rendered safe. Water ordinarily used will be entirely safe after being so treated. As the chemical acts more efficiently in clear waters, a filter-cloth, to be fastened over the opening of the bag and weighing 1 ounce, is provided, or water may be strained through a blanket. The bag is filled after it is in place. Suspended matter, such as clay, is largely removed and not left to interfere with the action of the chlorin.

Comprehensive experiments demonstrate the bacteriological efficiency of the appliance. The organisms causing typhoid fever, the dysenteries, including amoebic or tropical dysentery, and ciliates are promptly destroyed. Even in the vegetative form amoebae are killed in 15 minutes—ordinarily 5 to 10 minutes suffices after the addition of the powder to render the water safe to drink. Exposure of 30 minutes has been found to destroy all amoebae and ciliates under most severe conditions in a test.

4. *Disposal of garbage.*—For detachments or companies in camps, or in isolated locations where other means are not available, the incinerator shall be installed.

If wood is plentiful and medium-sized stones can be obtained, both liquid and solid refuse can be disposed of by using incinerators improvised for each company as follows:

A pit is dug about 5 feet long, 2½ feet wide, and 6 inches deep at one end and 12 at the other; the excavated earth is banked around the pit and the latter is then filled with stones on which a fire is built; when the stones have become heated liquid refuse is poured into the pit (shallow end) where it gradually evaporates; solid matter is burned on the fire.

The efficiency of this type of incinerator depends largely upon the fact that porous earth absorbs a very large part of the liquid slops, but it is not considered practicable to destroy the usual accumulation of slops every day without using an extravagant amount of fuel.

A type of incinerator having a fire bed of rock 1 foot deep will not permit the heat from the fire to penetrate beyond that depth. The rock wall on three sides of the fire bed absorbs much heat that otherwise might be dissipated into space, which increases the evaporating capacity of the incinerator enormously, and requires a comparatively very small amount of fuel. Incinerators built of large rocks are considered to be most efficient.

About one-sixth of a cord of wood per day per company is considered more than sufficient for the destruction of all slops and garbage, if ordinary care and attention is given the incinerator. Liquid slops should be evaporated by being poured slowly along the vertical walls of the incinerator, not upon the fire bed, and the solid garbage should be placed on top of the fuel. It has been determined that a skilled attendant can destroy 100 gallons of liquids and 23 cubic feet of solid garbage in about 12 hours by using one-sixteenth of a cord of wood.

Where rock is not available, material (brick, 340; lime, three-fourths bag) will be obtained on requisition from the quartermaster. Where disposal in a sanitary way can be made by means of carts, the garbage can may be used. The cans shall be thoroughly cleaned, scalded and coated with crude petroleum after emptying.

5. *Disposal of manure and care of picket lines.*—All manure shall be hauled to the camp dump. Picket lines shall be kept broom swept and all manure and straw hauled off daily. A weekly incineration of the picket lines shall be accomplished with crude oil at the rate of 10 gallons to each line. Crude oil may be obtained from the Quartermaster Corps on usual requisition.

6. *Disposal of excreta.*—Where a water carriage system is not feasible, the Havard box shall be used over the earth latrines. Daily inspections of this system are enjoined on the part of the medical officer of the organization, who will see that the following plan is carried out:

(a) The latrine shall be burned out thoroughly with crude oil and hay twice a day. (Each burning, 1 gallon crude oil and 7.5 pounds of hay, or straw.)

(b) The boxes shall be at all times kept fly-tight; this implies closure of all cracks and care of the hinges and a back construction so that the lids drop automatically. The latrine seats shall be washed off twice weekly with a 1 to 100 solution of cresoline, or other disinfectant, and whitewashed inside twice weekly.

(c) Latrines shall be rebuilt when filled to within 2 feet of the top.

(d) Where water-carriage system is in vogue, either the automatic flush or trough system shall be installed.

7. *Kitchens and mess rooms.*—Kitchens and mess rooms shall be securely screened and an efficient fly trap provided for catching such flies as gain entrance thereto. An effective fly trap consisting of a light wooden frame, covered with wire gauze, extending to about one-eighth of an inch of the floor of the trap, is readily constructed. It has been found that sweetened water, slightly acidulated with vinegar, is an excellent bait.

Ice boxes installed shall be inspected daily and drip pans emptied and scalded out.

Garbage cans shall be kept on wooden racks and elevated from the ground, and cans burned out daily with oil to prevent fouling, and kept clean outside with a coat of whitewash.

8. Arrangements shall be made for the installation of shower baths for all troops and a careful inspection shall be made daily to see that waste water therefrom is so disposed of as to prevent mosquito breeding.

9. The use of the mosquito bar is imperative and it shall be used in all districts where mosquitoes are prevalent.

10. *Food and drinks.*—No food, drinks, or like commodities will be sold in camp except in the authorized exchanges.

Attention is called to the use of the following foods, the elimination of which from the messes will serve to prevent a variety of intestinal disorders:

(a) Canned milk and fish opened the day before. (Fish and milk poisoning.)

(b) Hashes of meats and potatoes prepared the night previous. (Ptomaine poisoning of severe type.)

(c) Locally grown green vegetables, uncooked. (Dysenteries and diarrhea.)

11. *Malaria.*—When malaria prevails, the daily use of three grains of sulphate of quinine, to be increased as indicated, as a malarial prophylactic is made compulsory.

12. *Inspections.*—Surgeons of organizations shall make a daily inspection of the commands to which they pertain, covering the following: Picket lines, latrines, kitchens, barracks, inclosed toilets, baths, garbage receptacles, incinerators, and all food supplies; they shall make a verbal report at once to their respective commanding officers for the correction of any sanitary defects noted, and a similar report, with the action taken, to the sanitary inspector on his next visit.

13. A special report shall be made at once by the surgeon of each organization to the sanitary inspector for the information of the chief surgeon, in the following cases:

(a) Acute infectious or contagious diseases developing in barracks or camps.

(b) Cases of fever of 101° or over, attended with albuminuria.

(c) Unusual prevalence of mosquitoes in vicinity.

(d) Development of amœbic or bacillary dysentery or malaria in the command.

14. Venereal prophylaxis and venereal inspections shall be carried out thoroughly and the required monthly report of the number of new cases of venereal diseases shall be sent to the chief surgeon, through the sanitary inspector, each month.

15. Areas about camps in which mosquitoes could breed, such as cisterns, tanks, woods, gutters, pools, and drains shall be kept under close observation by the surgeon, and the proper remedies applied, i. e., screening, draining, oiling, etc.

16. Sanitary squads composed of medical officers, noncommissioned officers, and privates of the Medical Department will be organized by the chief surgeon. The sanitary squad will supervise and assist in the disposal of camp wastes. Civilians employed as sanitary laborers will be employed by the Quartermaster's Department and turned over to the Medical Department.

The sanitary police officer will make requisition on the Quartermaster General for such transportation, labor, material, etc., as may be needed. When assigned to this service they will not be diverted to other uses except by competent authority.

17. *Flies.*—All possible breeding places of flies, accumulations of wastes and filth, should be destroyed by incineration and particular attention given to the manure and refuse from the picket lines and stables.

An energetic campaign must be begun at once against the mature flies.

Each company or organization will provide itself with several large flytraps, to be placed near kitchen doors, store tents, and wherever flies are present.

INFECTIOUS DISEASES.

Certain infectious diseases are of primary importance in military sanitation and will be mentioned briefly in the following notes:

Typhoid fever.—Is caused by a specific organism, the bacillus typhosus. When the bacillus finds an entrance into man's intestinal tract typhoid fever is likely to result.

The excreta, and particularly the stools of the victim of typhoid, and his urine are loaded with the typhoid bacilli. Hence the necessity for extreme care in properly disposing of excreta, and the strict avoidance of camp pollution.

Typhoid fever, like cholera, is due to the transference of fecal matter of the infected individual, either directly or indirectly, to the alimentary canal of another nonimmune person.

Typhoid fever is, therefore, chiefly a filth disease and one widely distributed over the world. Its presence in a camp or community is chiefly determined by the personal cleanliness of the occupants, and largely by their method of disposing of human excreta.

Through careless means of disposing of feces and urine, water, milk, and food become infected, very largely through the agency of insects, principally the fly, which, breeding in accumulations of refuse, manure, and various forms of filth, transfer the disease germ mechanically on their bodies and in their secretions from the infected source to the food. Absolute protection of food supplies of all kinds and persistent warfare on the fly are imperative.

The most common mode of infection in typhoid, as was shown in the camps of 1898, was by contact, direct or indirect, with the infected individual. About 60 percent of all cases, as shown by investigations, are believed to be due to contact infection.

Direct contact infection follows intimate association with the infected person.

Indirect contact infection results from clothing, bedding, drinking cups, food, dishes, etc., which may serve to carry the infection from one person to another.

The necessity for great care as to personal cleanliness is obvious.

Frequent bathing, the washing of hands before eating, attention to laundering underclothing, and general personal cleanliness are obligatory, as well as the prompt sterilization of all articles which have been used by those suffering from the disease, as well as by "carriers," those excreting typhoid bacilli, though presenting no active symptoms of the disease.

These "carriers" are an insidious menace, an even greater one than a frank case of typhoid fever, because so frequently unrecognized. The greatest precautions must be taken by sanitary officers for the prompt recognition, isolation, and treatment of these "carriers."

The regulations direct that all soldiers, immediately on entrance into the service, be protected against typhoid fever by vaccination, as well as against smallpox. This regulation will be strictly enforced.

Malaria.—Is caused by a microorganism (the plasmodia malarie) which gains access to the body through the bites of mosquitoes belonging to the genus anopheles.

The predisposing causes of the disease are those that favor the development of mosquito life.

On account of the nocturnal habits of the malaria-bearing mosquitoes, the disease is more likely to be contracted at night.

Camps will not be located near swamps or in places where standing water favors the development of the mosquito. Every precaution will be taken to destroy these breeding places by draining and filling, or by oiling them and by the cutting away of all grass or undergrowth for a distance of 200 yards about camps and habitations in order that the adult mosquitoes may not find lodgment and protection there.

Since the malaria mosquito is chiefly a night biter, the regulation requiring the use of the mosquito bar at night will be rigidly enforced and frequent inspections made to see that no evasion of this order occurs.

In certain conditions the use of preventive doses of quinine may be required and administered by order under the supervision of the medical officer. All cases of malaria will be promptly isolated for treatment and protected from attacks by mosquitoes.

Yellow fever.—Is transmitted by the bite of the yellow-fever mosquito (the *Stegomyia calopus*), as proved by Maj. Walter Reed, Medical Corps, United States Army, in 1900.

Yellow fever is essentially a disease of the Tropics, and its existence is entirely dependent upon the distribution of this single species of mosquito, small and silver striped, active principally at evening time, and breeding generally in small accumulations of water close to the habitations of man.

The prevention of this disease, as in malaria, depends chiefly on the destruction of the mosquito and its breeding places, the proper protection against the bites of the insects at all times, and the early isolation, protection, and treatment of each case of yellow fever as soon as suspected.

Cholera.—Is an acute infectious disease caused by a comma-shaped microorganism—the cholera bacillus.

These germs breed in the intestines of man and find their way into the mouth of another individual through the medium of infected water, milk, and food; or the germs can be conveyed by carriers—by flies—and by contact infection, as in typhoid fever.

In every case this connection is certain and absolute. The disease extends in no other manner.

In the cholera patient practically the only infected discharge is the stool. It is therefore essentially a filth disease.

As in typhoid fever, contaminated food, dirty hands, flies, and infected clothing and bedding are frequent sources of danger. All the sanitary precautions used in the prevention of typhoid fever should be exercised, including the careful searching out of carriers—those individuals having the germs of cholera in their intestines and excreting them in their stools, thus scattering the infection and unknowingly infecting those about them and greatly assisting in the rapid spread of the disease.

These "carriers" in an infected district are often numerous, ranging in numbers from 5 to 10 per cent of the apparently normal population in a community where an epidemic prevails. "Carriers" are specially dangerous if connected in any way with the handling of the food supply.

In cholera, as in typhoid fever, dysentery, and other so-called diarrheal diseases, great care should be exercised to provide that—

- (1) Only sterilized water is used.
- (2) Only recently cooked and properly served food is allowed.
- (3) All kitchens are screened.
- (4) All refuse is burned and constant warfare made against the fly and its breeding places.

Anticholera vaccination has been proved an effective preventive measure also, but again, as in typhoid fever, the application of vaccination in these diseases does not lessen in any degree the responsibility or importance of rigidly enforcing all the general sanitary rules which have been here briefly stated.

Dysentery.—Under this head are included at least two severe specific diseases—bacillary dysentery and amebic dysentery—each caused by distinctive organisms.

In addition there may be mentioned under this heading all the various forms of diarrhea and colitis characterized by colic, bloody stools, and tenesmus.

Some of these are undoubtedly of a nonspecific and temporary nature, due to chill or to indiscretions in eating and drinking.

Prevention is the same as in typhoid fever and cholera, since there is no doubt that in the specific bacillary and amebic dysenteries the cause of the infection leaves the infected man by his excreta, largely in his feces.

Attention is again directed to what has already been said, to the great importance of strict attention to the disposal of all excreta and wastes, and to the careful investigation and protection of the water supply.

The three diseases, typhoid fever, cholera, and dysentery, may from the standpoint of prevention be considered as forming a well-marked group.

In all the mode of departure from the infected man is in his dejecta, in all it enters the infected man in food and drink, and in all three the fly very often provides the most important link.

Typhus fever.—Is an acute infectious disease caused by a specific germ, characterized by sudden onset, high fever, marked nervous symptoms, and macular eruption. It has prevailed in Mexico since the middle of the sixteenth century.

Typhus fever is transmitted to man only by the bite of the louse, which infests the body and clothing of the victims.

The prevention of typhus fever depends, therefore, upon personal cleanliness and the avoidance and destruction of infected lice.

Frequent bathing and cleansing of clothing, with repeated inspections of garments, particularly the seams, where the eggs of the louse are deposited, are imperative precautions.

The body louse lays its eggs among and attached to the fibers of clothes, with a special preference for seams and linings, a point to be remembered in the destruction of lice.

These eggs are the size of a small pinhead, yellowish white in color, goblet-shaped, and attached at the lower end to the cloth by a cement excreted by the female. They can be destroyed with boiling water or kerosene.

The avoidance of buildings, places, and persons known to be infected with lice is of first importance.

In case troops are sent into a typhus area, a railway disinfecting and bathing train will be provided and stationary plants of like character established at the bases.

Smallpox.—All soldiers will be vaccinated against this disease on enlistment. Vaccination confers immunity against smallpox for a number of years.

Any case occurring among recruits will be isolated, and contacts not protected by recent successful vaccination will be revaccinated.

Epidemic cerebro-meningitis.—Preventive measures in this disease consist of prompt recognition, isolation, and treatment of the patient.

"Carriers" will be also carefully sought for and kept under close observation.

Measles, mumps, and scarlet fever.—When these diseases appear in a command all cases will be immediately isolated, all "contacts" inspected daily, and, where the diseases show a tendency to spread, a detention camp will be established, where all recently arrived recruits will be detained under observation for a period of 12 days before being permitted to join their organizations.

Venereal diseases.—The cause of these diseases is a matter of common knowledge. They are entirely preventable, and the Government punishes those who expose themselves and contract venereal disease by prompt stoppage of pay and restriction of privileges while under treatment.

All preventive measures prescribed by Army Regulations against infections of this character will be rigidly enforced.

WATER SUPPLY.

The complaints as to insufficient and unpotable water supply at the various posts, mentioned in the last annual report, have been, in the main, remedied, and those made during the year 1915 will, it is believed, be satisfactorily adjusted by the appropriation of funds necessary to make such necessary alterations as will insure an adequate and potable supply.

In connection with the "Bags, water, sterilizing" placed upon the supply table, mention of which was briefly made in the last report of this office under this caption, it is considered meet to mention the highly satisfactory results obtained, as evidenced by the reports reaching this office, by the troops serving in the United States, as well as those making up the punitive expedition into Mexico, in the use of the bags in question.

Too much credit can not be given Maj. William J. L. Lyster, Medical Corps, the officer who devised this most useful article of equipment. During the last year certain improvements have been made in the original bag which, judging from the reports of trials, stamps it at once as an indispensable article of equipment. Among the more important merits which the bag possesses may be mentioned:

1. Its portability, thereby making it adaptable for use by small commands segregated by necessity from the main column of troops.
2. Simplicity of operation, thus insuring prompt and efficient service and a supply of potable water, not raised in temperature, whenever the demand arises.
3. Availability of potable water, obviating the desire to quench the thirst at streams, irrigation ditches, etc., on the march, since the canteen is sterilized and the filling of it supervised by those competent to determine potable water.
4. The lessening of the possibilities for ingesting, through unsterilized water, of organisms causing typhoid fever, the dysenteries,

including amoebic or tropical dysentery, thus making for a minimum sick rate and for a greater efficiency among the troops.

The hypochlorite of calcium used as the sterilizing agent in connection with the bag is put up in hermetically sealed glass tubes and the tubes packed in a corrugated paper container, making a light, portable package, with little or no weight added to the pack on the soldier's back. The containers being made of corrugated paper will stand much rough usage without danger of breaking the tubes and robbing them of its active agent—chlorin.

BARRACKS AND QUARTERS.

Attention is again invited to the matter of overcrowding at the recruit depots, particularly at Jefferson Barracks, Mo., and Columbus Barracks, Ohio. Crowding adds to the ready spread of infection, especially during the winter months, when the morbidity and mortality rates for measles have been rather high. Too much emphasis can not be laid on the evil results of crowding at this time of the year, when the recruiting is augmented, and with the prospect of an increased volume of recruits in the future this defect should be remedied. It has proven such a serious defect not alone in causing temporary suspension of the work at the depots, but in causing a very large number of deaths among young men contracting measles and other contagious diseases who had reported at the depots in robust health.

During the summer months, when an open-air life is permissible, the question is not so vital; but when climatic conditions are unfavorable and infections so rife and of such increasing virulence as experienced during the winter months, at which time recruiting is so much increased in volume, crowding is a most serious defect and should, for the best interests of the recruit depots, be reduced as much as possible, even if necessary to move the permanent personnel, as has been done in the past when an epidemic threatened.

It is believed that the expense of added buildings would, in the long run, prove a great saving in reducing the disability and mortality incident to overcrowding and the resultant spread of infection.

CLOTHING.

There has been no change in the clothing to be worn as provided for in Uniform Regulations since the last report. However, owing to the scarcity of materials it has been found necessary to make some change in the fabric used in the hat, this with the idea of meeting abnormal conditions in the National Guard.

A board of officers with the punitive expedition in Mexico give it as their opinion that the present cuff legging is not a success and urgently recommended the return to the legging similar in shape to that used in 1898, with certain parts reinforced with leather for the Field Artillery and Cavalry.

Several recommendations have been submitted from various sources to do away with the high collar on all of the coats, more especially in the Canal Zone, and adopt for the officers in particular a collar similar to that worn by the British officers, and for the men a turn-down collar similar to the old blouse collar worn before 1898. No definite action has, however, been taken on any of these recommendations.

UNITED STATES MILITARY ACADEMY, WEST POINT, N. Y.

The surgeon at West Point reports as follows on health conditions, etc.:

Corps of cadets.—The health of the corps has been excellent throughout the year. There were 579 hospital admissions during the year, equivalent to an annual admission rate of 1,000 per thousand, a decrease of 127 per thousand as compared with the preceding year; this is the smallest admission rate recorded during the past 10 years. The noneffective rate, or the number of cadets constantly in hospital, was 13.82 per thousand, as compared with 19.83 per thousand in 1915; this is the smallest rate during the past 10 years except in 1914, when it was 11.92. The average number of days' treatment of each case was 5, as compared with 6.4 for the preceding year, 4 days for 1914, and 4.8 for the preceding four years. The following table shows the hospital-admission rates and the noneffective rates per thousand for hospital cases for the past 10 years.

TABLE I.—Admissions.

Year.	Mean actual strength command.	Cases.	Rates per thousand.	Noneffective rates per thousand, hospital.
1906-7.....	440	682	1,550	35.29
1907-8.....	404	641	1,586	32.17
1908-9.....	422	992	2,360	32.77
1909-10.....	417	987	2,366	35.73
1910-11.....	407	780	1,916	28.25
1911-12.....	531	764	1,438	17.70
1912-13.....	515	587	1,139	16.89
1913-14.....	562	612	1,088	11.92
1914-15.....	612	690	1,127	19.83
1915-16.....	579	579	1,000	13.82

There were no cases of critical illness nor of dangerous injury under treatment during the year. A mild but extremely contagious epidemic of influenza occurred during December and January, lasting about one month and affecting about 16 per cent of the corps; 108 cases were admitted to the hospital for treatment, the average duration of each case being about four days; there were no serious complications. Forty-one cases of contagious catarrhal conjunctivitis were treated in hospital during the year. None of the cases were at all serious. One case of laryngeal tuberculosis, occurring in a cadet on furlough, was transferred to Fort Bayard, N. Mex. Five cases of malaria appeared during the year, one a new case and four recurrences from previous infections. Three cadets were discharged for physical disability, for valvular disease of the heart; one case followed an attack of articular rheumatism, in line of duty; the other two occurred previous to entrance into the Military Academy.

Of the 579 hospital admissions, general diseases, including 108 influenza, furnished the greatest proportion, 135, or 23.31 per cent; injuries and other affections due to external causes furnished 132, or 22.79 per cent; diseases of the digestive system 96, or 16.58 per cent; diseases of the respiratory system 79, or 13.64 per cent; and diseases of the eye and ear, including 41 cases of conjunctivitis, 56, or 9.65 per cent.

Of the 132 affections due to external causes, the greatest proportion were as usual due to accidents during riding; the next most frequent were due to football, to gymnastic exercises, to badly fitting shoes, to basket ball, and to baseball, as follows:

TABLE II.

	1915	1914
Accidents during riding.....	43	49
Injuries due to football.....	25	36
Accidents during gymnastics.....	17	13
Injuries from badly-fitting shoes.....	7	11
Injuries due to basket ball.....	4	7
Injuries due to baseball.....	7	3
Miscellaneous accidents and injuries.....	20	37
Total.....	132	156

The football season was marked by an unusually small number of accidents, most of them of a trivial nature, no injury being permanent. Twenty-five cases required hospital treatment entailing an absence of 159 days from duty, as compared with 36 cases and 221 days lost in hospital during the preceding season. The freedom of football players from serious accidents is gratifying and is to be attributed to the fine physical condition of the members of the squad when active fall practice is begun and also to the careful oversight on the part of the medical officer on duty with the squad and of the coaching staff. Accidents are far more likely to occur when a player begins to tire and when the fine edge of mental and physical fitness has begun to turn. If at that point the player is taken out of the game most of the serious accidents of football may be avoided. This is the policy which is followed at the academy and which has given excellent results.

The following table shows the number of football injuries during the past nine years and the number of days lost by treatment in hospital:

TABLE III.

Year.	Number of cases.	Days lost in hospital.	Average days per case.
1907.....	25	117	4.6
1908.....	62	362	5.8
1909.....	34	174	5.0
1910.....	27	210	7.7
1911.....	34	169	4.9
1912.....	35	259	7.4
1913.....	28	157	5.6
1914.....	36	221	6.1
1915.....	25	159	6.3

In the last annual report from this office, mention was made of the fact that badly-fitting shoes were the cause of much foot trouble, particularly in the fourth class during summer camp. An effort was made to prevent these troubles in the incoming class by requiring that all new cadets be measured and that shoes of proper size be issued in accordance with the detailed instructions prescribed by the War Department for fitting enlisted men. The practical results of this scheme have been exceedingly satisfactory. Capt. H. C. Coburn, jr., Medical Corps, on duty with the corps during their week's practice march in August, reported as follows:

"In closing this report I desire to call especial attention to the exceedingly small number of foot injuries treated on this march. Only eight cadets reported to the hospital during the entire week on account of blisters or corns due to marching and these were all of such a trifling nature that no duties were missed. I consider this excellent showing due to the good work done this year in accurately fitting the fourth class with shoes of proper size immediately upon admission to the academy. Last year many cadets reported daily with foot trouble, the bulk being made up of fourth classmen with all forms of injuries due to short shoes. The improvement this year was very noticeable and it is hoped that the good results may be perpetuated by the same careful supervision of footwear as was practiced this summer."

A minimum standard of vision has been fixed by the War Department for graduation at the Military Academy. The vision "shall not be less than 20/100 in one eye and 20/70 in the other, these defects to be entirely correctable by proper glasses." This is in accordance with the recommendation of Maj. S. H. Wadhams, Medical Corps, who was detailed by the War Department to make a special study of visual defects among cadets at the academy.

3. *Enlisted men.*—During the past year there were 231 admissions to sick report, equivalent to an admission rate per thousand of 326, the lowest on record in recent years. The noneffective rate was also lower than in 1915, being 7.9 per thousand as compared with 9.35 for 1915. Both the admission and the noneffective rates are very considerably lower than for the Army at large. The following table shows the number of admissions, the admission rate and the noneffective rate per thousand among enlisted men for the past six years:

TABLE IV.

	1911	1912	1913	1914	1915	1916
Admissions to sick report.....	622	401	415	302	359	230
Rates per thousand (admission).....	825	626	603	468	501	328
Noneffective rates.....	18.87	14.81	15.26	11.25	9.35	7.91
Mean annual strength of command.....	649	648	688	702	716	706

The number of admissions for transmissible diseases was small, including venereal, 28; influenza, 25; malaria, 3; tuberculosis, 3. The three cases of malaria reported were recurrent attacks; the three cases of tuberculosis were transferred to Fort Bayard, N. Mex., for treatment. No case of pneumonia was reported during the year.

4. *Civilian population.*—Health conditions among civilians attached to this command have been very satisfactory. A mild epidemic of mumps occurred during December and January among the children of officers and enlisted men, numbering 42 cases; 9 cases of measles were reported during the year, 3 of chicken pox, and 1 of whooping cough.

5. *Sanitation.*—The sanitary conditions of the post have been excellent throughout the year. The stringent measures against mosquito and fly breeding heretofore adopted have been successfully carried out. Only eight cases of malaria occurred during the year, of which seven were recurrences of previous infection. Five cases were among cadets, equivalent to an annual admission rate of 8.6 per thousand, the lowest on record except in 1914; three cases were among enlisted men, an equivalent rate of 4.2 per thousand. The admission rates for malaria for cadets and enlisted men are shown in the following table:

TABLE V.

	1908	1909	1910	1911	1912	1913	1914	1915	1916
Cadets.....	19.0	126.3	127.6	58.9	88.5	25.2	.0	11.4	8.6
Enlisted men.....	69.4	72.2	76.2	36.9	41.6	23.2	5.6	8.3	4.2

The following tables show the character and amount of certain of the professional work done during the year:

TABLE VI.—Dental operations.

Affecting teeth and gums.....	3, 165
Affecting mouth and jaws.....	204
Fillings.....	1, 724
Bridges.....	33
Crowns.....	76
Artificial dentures.....	4
Miscellaneous treatments.....	3, 610
Total.....	8, 816

TABLE VII.—Surgical operations.

	Civillians.	Cadets.	Officers.	Enlisted men.	Total.
Abortion, incomplete, curettage.....	4				4
Abscess, incision and drainage.....	31	45	6	10	92
Adenoids, excision.....	36		1		37
Appendicectomies.....	13	3	1	4	21
Amputation, finger.....	1			1	2
Cellulitis, incision and drainage.....	18	4		6	28
Circumcisions.....	8			2	10
Corns, excision.....		5			5
Cysts, excision.....	1	2	3	4	10
Dislocations, reduction.....		3			3
Empyema, antrum of Highmore, incision and drainage.....		2	1		3
Exostosis, excision.....		1			1
Fistula in ano, incision.....	1				1
Fractures, reduction.....	4	9	3		16
Hematoma, aspiration.....		1			1
Hematoma, incision.....		1			1
Hemorrhoids, excision.....	1	7	3		11
Herniotomies.....	1	1	1	2	5
Hydrocele, aspiration.....	1				1
Ingrowing toe nail, excision.....		1			1
Lipoma, excision.....			1		1
Mole, excision.....		1			1
Necrosis, bones of wrist, excision.....	1				1
Ovariectomy.....	1				1
Paracentesis, membrana tympani.....	2	1			3
Perineorrhaphy.....	1				1

TABLE VII.—Surgical operations—Continued.

	Civilians.	Cadets.	Officers.	Enlisted men.	Total.
Plastic operation, removal of tissue.....	1				1
Polypus, nasal, removal of.....				1	1
Polypus, aural, removal.....				1	1
Septum, deflected nasal, submucous resection.....	1				1
Synovitis, aspiration.....		2			2
Tonsillectomies.....	33	1	2		36
Thyroidectomy, partial.....	1				1
Ulcer, excision.....	1				1
Ulcer, curettage.....	1				1
Uterus, curettage and dilatation.....	4				4
Uterus, curettage and removal left tube and ovary.....	1				1
Varicocele, excision.....	1				1
Warts, excision.....		12			12
Wounds, suture.....	20	30	2	4	56
Total.....	189	132	24	35	380

TABLE VIII.—Laboratory work.

Examination of—		Examination of—	
Blood.....	249	Stomach contents.....	4
Feces.....	15	Water.....	12
Urine.....	1, 259	Milk.....	5
Pus.....	13	Urethral discharges.....	54
Throat cultures.....	103		
Sputum.....	63	Total.....	1, 777

TABLE IX.—Miscellaneous.

Radiograms.....	237	Vaccinations.....	235
Eye refractions.....	244	Surgical dressings.....	3, 555
Typhoid prophylactics.....	203	Prescriptions filled.....	4, 916

There have been 26 births and 7 deaths during the year.

TABLE X.—Births.

Males.....	11
Females.....	15
Total.....	26

TABLE XI.—Deaths.

Cause.	Officers.	Retired enlisted men.	Civilians.	Children.
Ill-nutrition.....				1
Mitral insufficiency.....		1		
Intestinal obstruction.....			1	
Gunshot wound of head.....	1			
Stillborn.....				3
Total.....	1	1	1	4

ALASKA.

The mean strength of the troops, officers, and enlisted men serving in Alaska during the past year was 787, as compared with 958 in 1914. This force consisted of Infantry, Signal Corps, and Hospital Corps, all white. Alaska still remains the healthiest region in which the Army is stationed.

The admission rate for all causes was 378.65 per 1,000 in 1915, as compared with 408.14 in 1914. The rate for disease was 292.24 per 1,000, and that for external causes 86.40, as compared with 303.76 and 104.38, respectively, in 1914. The corresponding rates for the United States were, for total causes, 696.04 per 1,000; that for disease being 559.43, and that for external causes, 136.61. The diseases having the highest admission rates are shown in the following tabulation:

Admission rates for some of the principal diseases for Alaska, American troops, officers and enlisted men.

	Total officers and enlisted men.		Enlisted men.	
	1915	1914	1915	1914
Veneral diseases.....	24.31	20.88	35.89	21.88
Bronchitis.....	30.49	19.83	28.83	20.77
Tonsillitis.....	25.41	29.23	26.21	30.00
Rheumatism, muscular.....	15.25	10.44	15.73	10.98
Pharyngitis.....	12.71	.....	13.11	.....
Alcoholism (all).....	10.17	16.70	10.48	17.49
Mental alienation.....	10.17	9.89	10.48	10.98
Influenza.....	8.89	24.01	9.17	24.04
Diarrhea and enteritis.....	7.62	7.31	7.86	7.65
Appendicitis.....	6.35	12.53	6.55	13.11
Rheumatism, articular (all).....	5.08	4.18	5.24	4.37
Constipation.....	2.54	4.18	2.62	4.37
Gastritis, acute and chronic.....	2.54	3.13	2.62	3.28
Synovitis.....	2.54	2.09	2.62	2.19
Malarial fevers.....	1.27	2.09	1.31	2.19
Tuberculosis (all).....	1.27	1.04	1.31	1.00
All causes.....	378.65	408.14	386.63	422.96

The noneffective rate was 8.71 per 1,000 in 1915, as compared with 10.17 in 1914. The rate for disease was 6.02 and for external causes 2.70 per 1,000.

The diseases causing the highest noneffective rates are shown below.

Noneffective rates for some of the principal diseases for Alaska, American troops, officers and enlisted men.

	Total officers and enlisted men.		Enlisted men.	
	1915	1914	1915	1914
Veneral diseases.....	0.53	0.29	0.54	0.31
Appendicitis.....	.39	.63	.40	.66
Bronchitis.....	.37	.29	.34	.31
Rheumatism, muscular.....	.33	.10	.34	.10
Mental alienation.....	.27	.98	.28	1.03
Tonsillitis.....	.13	.33	.14	.32
Tuberculosis (all).....	.15	.33	.15	.34
Influenza.....	.13	.33	.14	.32
Alcoholism (all).....	.08	.19	.08	.20
Pharyngitis.....	.07	.....	.07	.....
Rheumatism, articular (all).....	.06	.06	.06	.06
Diarrhea and enteritis.....	.04	.06	.04	.06
Synovitis.....	.04	.04	.04	.04
Constipation.....	.03	.06	.03	.06
Gastritis, acute and chronic.....	.02	.01	.02	.01
Malarial fevers.....	.01	.04	.01	.04
All causes.....	8.71	10.17	8.91	10.52

The death rate in 1915 was 2.54 per 1,000, and in 1914 was 8.35. In actual numbers 2 deaths occurred, one from disease and one from external causes.

The discharge rate, all for disease, in 1915, was 11.80 per 1,000, as compared with 8.74 in 1914.

Tables Nos. 3 and 76 give general figures for all enlisted men as compared with those serving in other countries, and Table No. 73 for all officers and enlisted men, together with proportionate figures for disease and injury.

Enlisted men invalided home from Alaska, 1915.

Cause.	Number of cases.	Per-centage of total cases.	Duty.	Dis-charged on cer-tificate of dis-ability.	Died.	Other-wise dis-posed of.	Remain-ing at end of year.
Mental alienation (defective mental development, 1; dementia precox, 1; psychosis maniac depressive, 1).....	3	23.08	.....	3	.....	.....	.....
Flat foot.....	2	15.38	.....	2	.....	.....	.....
Pulmonary tuberculosis.....	1	7.69	.....	.....	.....	.....	1
Exophthalmic goiter.....	1	7.69	1	.....	.....	.....	.....
Chronic alcoholism.....	1	7.69	.....	1	.....	.....	.....
Hysteria.....	1	7.69	.....	1	.....	.....	.....
Pleurisy.....	1	7.69	.....	.....	.....	.....	1
Asthma.....	1	7.69	.....	.....	.....	.....	1
Ulcer of stomach.....	1	7.69	.....	1	.....	.....	.....
Arthritis.....	1	7.69	.....	.....	.....	1	.....
Total cases.....	13	.....	1	8	.....	1	3
Percentage of total cases.....	.....	100.00	7.69	61.54	.....	7.69	23.08

PHILIPPINE ISLANDS.

AMERICAN TROOPS (ENLISTED MEN).

By reference to the figures furnished below it will be noted that no marked improvement in the health of the American troops serving in the Philippine Islands resulted during 1915 when compared with the figures for 1914. While the rate for venereal diseases (all) compared favorably with the admission rate for 1914, these diseases still remain a matter of concern. The admission rate for malarial fever has taken a remarkable jump, compared with the rate prevailing for that disease during 1914, being 45.26 for the latter and 63.12 per 1,000 for 1915.

The mean strength of the enlisted American troops stationed in the Philippine Islands for the year was 11,834 (S. G. O.). Of this number 10,493 were white and 1,341 colored. The statistics for the Philippine Scouts, of whom there were 5,505, will be given separately.

ADMISSION RATES.

During the year there were 11,721 case admissions for all causes, white and colored troops, making a case admission rate of 990.45 per 1,000, as compared with 8,999 case admissions and a case admission rate of 877.69 per 1,000 for 1914, 922.06 for 1913, and 1,246.99 for 1912.

The case admission rate for disease only was 871.05 for 1915, 746.61 for 1914, 776.28 for 1913, and 1,075.34 for 1912.

The case admission rate for white troops for all causes was 954.35, as compared with 1,272.93 for colored troops, the latter having a mean strength of 1,341 during the year.

The case admission rate for injuries for white troops was 120.08 per 1,000 as compared with 114.09 per 1,000 for colored troops, and for the total American troops, white and colored, 119.40 per 1,000, the lowest rate for several years.

CONSTANTLY NONEFFECTIVE RATES.

The total constantly noneffective rate for the year was 29.15 per 1,000; that for white troops being 28.20 and for colored, 36.57.

The total noneffective rate for disease only in 1915 was 25.42 per 1,000, as compared with 24.62 for white troops and 31.73 for colored. The rates for 1914 were 26.60, 27.29, and 23.56 per 1,000, respectively.

DISCHARGE ON CERTIFICATE OF DISABILITY.

The American soldiers are very rarely discharged in the Philippine Islands, being invalided home and discharged in the United States; however, those so discharged are credited to the Philippines. Table No. 28 shows the diseases for which these discharges were made.

The discharged rate for 1915 was 23.22 per 1,000 as compared with the corresponding rate of 10.62 for 1914. The rate for disease only was 22.04 per 1,000, and that for injury, 1.18, as compared with

the corresponding rates of 10.24 and 0.38 for 1914. The total rates for the white troops was 23.79 as compared with 18.64 per 1,000 for the colored troops.

The diseases causing the highest number of discharges were: Mental alienation, with a rate of 7.99; tuberculosis, 3.28; flat foot, 2.27, and venereal diseases, 0.93. The corresponding rates for the United States were 2.54, 1.67, 1.19, and 0.88 per 1,000, respectively.

TABLE NO. 28.—*Discharges for disability, American troops in the Philippine Islands, year 1915.*

Cause of discharge.	Num-ber dis- charged.	Per- centage of dis- charges for dis- ability for dis- ease.	Discharged for disability.				
			In line of duty.	Not in line of duty.		Discharged for disability before assignment.	
				Con- tracted before enlist- ment.	Con- tracted after enlist- ment.	In line of duty.	Not in line of duty.
DISEASES.							
Diseases of the nervous system and organs of special sense.....	130	49.62	16	111	3		
Mental alienation.....	95	36.26	9	84	2		
Dementia precox.....	50	19.08	8	42			
Defective mental development.....	21	8.02		21			
Psychosis manic depressive.....	2	.76	1	1			
General paralysis of the insane.....	1	.38			1		
Psychosis traumatic.....	1	.38			1		
Other forms.....	20	7.63		20			
Epilepsy.....	16	6.11		16			
Neurasthenia.....	5	1.91	4	1			
Otitis media.....	4	1.53		4			
Other nervous diseases.....	3	1.15		3			
Neuritis.....	2	.76	1	1			
Hysteria.....	2	.76		2			
Locomotor ataxia.....	1	.38			1		
Anterior poliomyelitis, acute.....	1	.38	1				
Choroiditis.....	1		1				
General diseases.....	67	25.57	19	31	17		1
Tuberculosis.....	39	14.88	18	21			1
Of the lungs.....	38	14.50	18	20			1
Of the joints.....	1	.38		1			
Venereal diseases.....	11	4.20		5	6		
Syphilis.....	6	2.29		4	2		
Tertiary.....	5	1.91		3	2		
Secondary.....	1	.38		1			
Gonorrhea.....	5	1.91		1	4		
Arthritis.....	3	1.15			3		
Cystitis.....	1	.38		1			
Endocarditis.....	1	.38			1		
Alcoholism, chronic.....	6	2.29		1	5		
Drug habit.....	6	2.29			6		
Morphine.....	2	.76			2		
Cocaine.....	2	.76			2		
Morphine and cocaine.....	2	.76			2		
Dysentery, chronic entomebic.....	1	.38		1			
Rheumatic fever, subacute.....	1	.38		1			
Exophthalmic goiter.....	1	.38		1			
Pernicious anemia.....	1	.38	1				
Diabetes insipidus, chronic.....	1	.38		1			
Diseases of the organs of locomotion.....	34	12.98	2	32			
Flat foot.....	27	10.30		27			
Others.....	2	.76		2			
Periostitis.....	1	.38	1				
Ankylosis, chronic.....	1	.38	1				
Arthritis, chronic.....	1	.38		1			
Hammer toes.....	1	.38		1			
Metatarsalgia, chronic.....	1	.38		1			
Diseases of the circulatory system.....	11	4.20	5	5	1		1
Organic heart disease.....	8	3.05	4	4			1
Chronic valvular disease.....	4	1.53		2	2		
Chronic myocarditis.....	3	1.15		1	2		
Chronic endocarditis.....	1	.38		1			

TABLE NO. 28.—Discharge for disability, American troops in the Philippine Islands, year 1915—Continued.

Cause of discharge.	Num-ber dis- charged.	Per- centage of dis- charges for dis- ability for dis- ease.	I is charged for disability.				
			In line of duty.	Not in line of duty.		Discharged for disability before assignment.	
				Con- tracted before enlist- ment.	Con- tracted after enlist- ment.	In line of duty.	Not in line of duty.
DISEASES—continued.							
Diseases of the circulatory system—Contd.							
Endocarditis, acute.....	1	0.38	1	.....	.....	.....	.....
Aneurism.....	1	.38	.....	.....	1	.....	.....
Tachycardia.....	1	.38	.....	1	.....	.....	.....
Diseases of the digestive system.....							
Ulcer of the stomach.....	8	3.05	2	6	.....	.....	.....
Inguinal hernia.....	2	.76	.....	2	.....	.....	.....
Peritoneal adhesions.....	2	.76	.....	2	.....	.....	.....
Gastritis, catarrhal, chronic.....	2	.76	1	1	.....	.....	.....
Appendicitis, catarrhal, chronic.....	1	.38	1	.....	.....	.....	.....
Diseases of the respiratory system.....							
Asthma.....	6	2.29	.....	6	.....	.....	.....
Bronchitis, chronic.....	4	1.53	.....	4	.....	.....	.....
Pneumoconiosis.....	1	.38	.....	1	.....	.....	.....
Diseases of the genito-urinary system.....							
Enuresia.....	6	2.29	.....	6	.....	.....	.....
Nephritis, chronic interstitial.....	4	1.53	.....	4	.....	.....	.....
Prostatitis, chronic.....	1	.38	.....	1	.....	.....	.....
Total for disease.....	262	100.00	44	197	21	.....	2
EXTERNAL CAUSES.							
Secondary results of injuries.....							
Traumatism by falls.....	6	42.86	.....	6	.....	.....	.....
Traumatism by crushing.....	3	21.43	3	.....	.....	.....	.....
Traumatism by gunshot.....	2	14.29	2	.....	.....	.....	.....
Traumatism by incised wound.....	1	7.14	1	.....	.....	.....	.....
Traumatism, fracture of hand by striking object.....	1	7.14	1	.....	.....	1	.....
Total for external causes.....	14	100.00	7	6	1	.....	.....
Total for disease.....	262	94.93	44	197	21	.....	2
Total for external causes.....	14	5.07	7	6	1	.....	.....
Grand total.....	276	100.00	51	203	22	.....	2

DEATHS.

Deaths occurring in the United States in the persons of those invalided home from the Philippine Islands are credited to that station.

There were 36 deaths among the American troops, officers and enlisted men, during the year 1915, 34 of which were enlisted, white and colored; 20 from disease and 16 from injury, the total death rate being 2.87 per 1,000; that for disease 1.59 and for injury 1.27 per 1,000. The figures here given are taken from Table No. 29 and are for officers and enlisted men. The figures slightly differ from those given in Table No. 72 at the back of the report, which are for enlisted men only. The total death rate, officers and enlisted men, for 1914 was 3.64 per 1,000; that for disease being 1.95 and for injury 1.69 per 1,000. There were 3 deaths from drowning in 1915, as compared with 4 in 1914. Six suicided in 1915 as against 2 in 1914.

Tuberculosis caused 6 deaths in 1915 and 4 in 1914; dysentery, 2 in 1915 and 1 in 1914; alcoholism, no deaths in 1915 and 2 in 1914.

TABLE NO. 29.—Causes of death, American troops, Philippine Islands, year 1915, officers and enlisted men.

Causes of death.	Number of deaths.	Ratio per 1,000 of—	
		Mean strength.	Deaths from disease.
DISEASES.			
Tuberculosis (all of the lungs).....	6	0.48	300.00
Purulent infection and septicemia.....	3	.24	150.00
Dysentery, entamoebic.....	2	.16	100.00
Diphtheria, laryngeal.....	1	.08	50.00
Syphilis, tertiary.....	1	.08	50.00
Myelitis, acute diffuse.....	1	.08	50.00
Apoplexy, cerebral.....	1	.08	50.00
Valvular disease of the heart.....	1	.08	50.00
Aneurism of aorta.....	1	.08	50.00
Dilatation of stomach, acute.....	1	.08	50.00
Nephritis, acute.....	1	.08	50.00
Nephritis, chronic interstitial.....	1	.08	50.00
Total.....	20	1.59	1,000.00
EXTERNAL CAUSES.			
Suicidal.....	6	.48	375.00
By gunshot wound (rifle, 2; revolver, 2).....	4	.32	250.00
By hanging.....	2	.16	125.00
Homicidal.....	2	.16	125.00
By gunshot.....	1	.08	62.50
Missile unknown.....	1	.08	62.50
Accidental.....	8	.64	500.00
Drowning (while swimming, 1; circumstances unknown, 2).....	3	.24	187.50
Crushing (railroad accident, 2; automobile accident, 1).....	3	.24	187.50
Burns, general (explosion of wood alcohol).....	1	.08	62.50
Fall (into well).....	1	.08	62.50
Total.....	16	1.27	1,000.00
Total for disease.....	20	1.59	555.56
Total for external causes.....	16	1.27	444.44
Grand total.....	36	2.87	1,000.00

PREVALENCE OF SPECIAL DISEASES, AMERICAN TROOPS
(ENLISTED MEN).

TYPHOID FEVER.

None occurred in 1915 or in 1914 and 1913.

MALARIAL FEVERS.

The admission rate for all fevers of this class was 63.12 per 1,000 as compared with 45.26 in 1914 and 112.08 in 1913. The rates for American and native troops are shown graphically in charts X and Y.

By reference to Table No. 31 it will be seen that Camp Stotsenburg had the highest admission rate for American garrisons, 121.18 per 1,000, as compared with 81.12 in 1914. Camp Eldridge, last year stood in second place, this year has dropped down to No. 4. Fort Mills, which was No. 7 on the list in 1914, now takes second place with a rate for 1915 of 88.48, compared with 31.75 per 1,000 in 1914. In this connection it should be noted that the posts garrisoned with native troops have considerably higher admission rates than those garrisoned with American troops.

TABLE NO. 31.— *Malarial fevers, year 1915, compared with year 1914, for stations in the Philippine Islands.*

Posts.	Ratio per 1,000 of mean strength.	
	1915	1914
Principally of American troops:		
Camp Stotsenburg.....	121. 18	81. 12
Fort Mills.....	88. 48	31. 75
Regan Barracks.....	37. 15	39. 77
Camp Eldridge.....	32. 44	75. 47
Fort Santiago and headquarters of Philippine Department.....	27. 62	15. 62
Fort William McKinley.....	17. 95	33. 28
Camp McGrath.....	12. 40	16. 97
Cuartel de Espana.....	10. 01	72. 84
Principally of Philippine Scouts:		
Ludlow Barracks.....	213. 42	778. 49
Camp Overton.....	110. 09	75. 47
Camp Gregg.....	70. 06	247. 01
Pettit Barracks.....	62. 90	150. 48
Augur Barracks.....	57. 42	178. 90
Fort San Pedro.....	56. 38	183. 95
Camp Keithley.....	43. 35	62. 62
Camp Nichols.....	26. 79	17. 73
Warwick Barracks.....	21. 65	152. 50
Camp John Hay.....	13. 13	37. 27

UNDETERMINED FEVERS.

The admission rate for these fevers during 1915 was 4.31 per 1,000, as compared with 4.39 in 1914, 5.27 in 1913, and 15.46 in 1912. The various diagnoses under this head are:

Febricula.....	27
Fevers, simple, continued.....	33
Fever, type undetermined.....	30
Total.....	90

The diagnoses given above are for officers and enlisted men. American troops, and Philippine Scouts.

SMALLPOX AND VARIOLOID.

No cases occurred in the islands. One case developed in a casual transferred from a transport en route to the United States.

VENEREAL DISEASES.

Notwithstanding vigorous efforts made by the authorities and the carrying out of the provisions of G. O. 31, 1912, and G. O. 45, 1914, venereal diseases still hold first place for both admission and non-effective rates. Of the total admissions for the year over one-fifth were due to venereal diseases. There were 482 admissions for syphilis, 450 for chancroid and 1,273 for gonorrhea. Of the total noneffective rate for disease, 25.42 per 1,000, venereal diseases alone contributed a rate of 8.10 during 1915 as compared with 10.41 in 1914.

The following tabulation shows the admission rates and their causes for the enlisted personnel serving in the Philippines during 1915:

Venereal diseases, Philippine Islands (enlisted men).

	Syphillis.	Chan-croid.	Gonor-rhea.	Total venereal.
White troops:				
1915.....	37.93	38.79	100.35	177.08
1914.....	47.28	47.40	80.11	174.79
Colored troops:				
1915.....	62.64	32.06	164.05	258.76
1914.....	48.46	89.46	95.85	233.76
All American troops (enlisted):				
1915.....	40.73	38.02	107.57	186.32
1914.....	47.49	55.10	83.00	185.60

TABLE NO. 32.—*Venereal diseases among officers and enlisted men at posts in the Philippines having strength of more than 300 men, year 1915.*

Posts.	Admissions.		
	Total.	Ratios.	Mean strength.
Principally American troops:			
Regan Barracks.....	230	356.04	646
Camp Eldridge.....	164	312.98	524
Camp Stotsenburg.....	433	213.30	2,030
Camp McGrath.....	148	203.86	726
Cuartel de España.....	175	194.66	899
Fort William McKinley.....	572	190.15	3,008
Fort Mills.....	416	88.90	4,679
Principally Philippine Scouts:			
Augur Barracks.....	78	93.30	836
Fort San Pedro.....	23	68.25	337
Camp John Hay.....	18	33.77	533
Warwick Barracks.....	11	23.81	462
Pettit Barracks.....	9	18.87	477
Ludlow Barracks.....	13	14.30	909
Camp Keithley.....	9	13.93	646
Camp Overton.....	3	0.88	436

ALCOHOLISM AND ITS RESULTS.

The admission rate for this disability for 1915 was 18.08 per 1,000 as compared with 22.14 in 1914, a considerable reduction when considering the increase in this rate in 1914 over that for 1913.

The noneffective rate was 0.21 per 1,000 as compared with 0.34 in 1914. The rate for white troops was 0.22 and that for colored 0.14, the former having 197 admissions as against 17 for the colored troops.

CHOLERA.

No case of cholera reported among the American troops during 1915.

TUBERCULOSIS.

Seventy-six cases of tuberculosis occurred among American troops, making a ratio of 6.42 per 1,000. All of these cases were transferred to the United States. Of the 6 deaths reported all occurred in the cases invalided home. In 1914 there were 75 cases of this disease, with an admission rate of 7.31 per 1,000, with 3 deaths.

BERIBERI.

No case occurred among American troops.

DYSENTERY.

A marked decrease in the incidence of this disease is noted for 1915, but 63 cases occurring with an admission rate of 5.32 per 1,000, as compared with 133 cases with a ratio of 12.97 in 1914. Of the 63 cases reported, 2 were bacillary, 58 entamoebic, and 3 cases unclassified. The entamoebic dysentery gives an admission rate of 4.90 per 1,000.

The noneffective rate for dysentery (all) was 0.31 per 1,000 for 1915, as compared with 0.76 for 1914.

DENGUE.

This disease, which appeared in epidemic form at seven posts in the islands, had the second highest admission rate as well as the second highest noneffective rate, being 131.31 and 1.94 per 1,000, respectively, as compared with 33.16 and 0.55 per 1,000, respectively, in 1914. One thousand five hundred and fifty-four cases in all were reported during the year. No discharge or death, however, resulted in this number of cases.

MENTAL ALIENATION.

There were 86 admissions for mental alienation in 1915, with an admission rate of 7.27 per 1,000. In the United States the rate was 3.04 per 1,000. In 1914 the rates were 6.24 for American troops in the Philippine Islands and 3.83 in the United States.

DIARRHEA AND ENTERITIS.

A marked reduction over 1914 is noted in the cases of this disease, being 449 in 1915 as compared with 647 in 1914. The admission rate per 1,000 in 1915 was 37.94; in 1914 it was 63.10; in 1913, 67.48; and in 1912, 60.69.

The noneffective rate for 1915 was 0.51 as compared with 0.91 per 1,000 in 1914, being a marked improvement over the rate for 1913, when it was 1.14.

TYPHUS FEVER.

No case of this disease occurred among the American troops. Three cases, however, were reported in the native troops from Camp Keithley.

INVALIDING TO THE UNITED STATES.

The disease causing the highest number of men to be invalided home were, with actual numbers: Tuberculosis, 93; mental alienation, 93; flat foot, 50; epilepsy, 18; syphilis, 17, and neurasthenia, 12.

TABLE NO. 33.—*Enlisted men invalided home from the Philippine Islands, year 1915.*

Cause.	Num-ber of cases.	Per-cent- age of total cases.	Duty.	Dis- charged on cer- tificate of disa- bility.	Died.	Other- wise dis- posed of	Re- main- ing at end of year.
Tuberculosis (pulmonary, 91; of other organs, 2)	93	20.76	8	38	7	8	36
Mental alienation (defective mental develop- ment 20; general paralysis of the insane, 1; dementia precox, 50; others, 22)	93	20.76	.....	85	.....	.....	8
Flat foot	50	11.16	4	34	.....	2	10
Epilepsy	18	4.02	1	17	.....	.....	.....
Syphilis	17	3.79	3	8	.....	5	1
Neurasthenia	12	2.68	5	4	.....	2	1
Organic disease of heart	11	2.46	2	8	.....	1	.....
Dysentery	8	1.79	6	1	.....	.....	1
Gonorrhea	8	1.79	1	5	.....	.....	2
Secondary results of injury	8	1.79	.....	7	.....	1	.....
Drug habit	7	1.56	.....	7	.....	.....	.....
Chronic alcoholism	6	1.34	1	5	.....	.....	.....
Pleurisy	6	1.34	2	1	.....	1	2
Fracture	6	1.34	1	3	.....	.....	2
Exophthalmic goitre	5	1.12	3	2	.....	.....	.....
Otitis media	5	1.12	.....	4	.....	1	.....
Enuresis	5	1.12	.....	5	.....	.....	.....
Asthma	4	.89	1	3	.....	.....	.....
Inguinal hernia	4	.89	1	2	.....	1	.....
Other intestines (adhesions 3, enteroptosis 1) ..	4	.89	.....	2	.....	.....	2
Chronic articular rheumatism	3	.67	.....	1	.....	1	1
Neuritis	3	.67	.....	3	.....	.....	.....
Other nervous diseases	3	.67	.....	3	.....	.....	.....
Chronic gastritis	3	.67	2	1	.....	.....	.....
Chronic gastroenteritis	3	.67	1	.....	.....	2	.....
Sprue	3	.67	2	.....	.....	1	.....
Chronic nephritis	3	.67	1	1	.....	1	.....
Others of locomotion	3	.67	.....	2	.....	.....	1
Gunshot wound	3	.67	1	1	.....	.....	1
Hysteria	2	.45	.....	1	.....	.....	1
Ulcer of stomach	2	.45	.....	2	.....	.....	.....
Arthritis	2	.45	1	1	.....	.....	.....
Synovitis	2	.45	1	.....	.....	.....	1
Incised wound	2	.45	.....	2	.....	.....	.....
Crushing	2	.45	.....	2	.....	.....	.....
Chronic malaria, tertian	1	.22	.....	.....	.....	1	.....
Rheumatic fever, subacute	1	.22	.....	1	.....	.....	.....
Arthritis deformans	1	.22	.....	.....	.....	.....	1
Pernicious anemia	1	.22	.....	1	.....	.....	.....
Diabetes insipidus	1	.22	.....	1	.....	.....	.....
Locomotor ataxia	1	.22	1	.....	.....	.....	.....
Anterior poliomyelitis, acute	1	.22	.....	1	.....	.....	.....

TABLE NO. 33.—*Enlisted men invalided home from the Philippine Islands, year, 1915—*
Continued.

Cause.	Num- ber of cases.	Per- cent- age of total cases.	Duty.	Dis- charged on cer- tificate of disa- bility.	Died.	Other- wise dis- posed of.	Re- main- ing at end of year.
Paralysis, cause undetermined.....	1	0.22	.....	.....	.....	.....	1
Multiple neuritis.....	1	.22	.....	.....	.....	.....	1
Chronic conjunctivitis.....	1	.22	1	.....	.....	.....	.....
Trachoma.....	1	.22	.....	1	.....	.....	.....
Optic atrophy.....	1	.22	.....	1	.....	.....	.....
Strabismus.....	1	.22	1	.....	.....	.....	.....
Endocarditis, acute.....	1	.22	.....	1	.....	.....	.....
Aneurism.....	1	.22	1	.....	.....	.....	.....
Arterial sclerosis.....	1	.22	.....	1	.....	.....	.....
Lymphadenitis, cervical.....	1	.22	.....	.....	.....	.....	1
Tachycardia.....	1	.22	.....	1	.....	.....	.....
Rhinitis atrophic.....	1	.22	.....	1	.....	.....	.....
Chronic bronchitis.....	1	.22	.....	1	.....	.....	.....
Anthraxosis.....	1	.22	.....	1	.....	.....	.....
Chronic colitis.....	1	.22	.....	.....	.....	.....	1
Appendicitis.....	1	.22	.....	1	.....	.....	.....
Ischio-rectal abscess.....	1	.22	.....	.....	.....	1	.....
Ulcer of duodenum.....	1	.22	.....	.....	.....	.....	1
Abscess of liver.....	1	.22	.....	.....	.....	.....	1
Cholecystitis.....	1	.22	.....	.....	.....	.....	1
Chronic cystitis.....	1	.22	.....	.....	.....	.....	1
Prostatitis, non venereal.....	1	.22	.....	1	.....	.....	.....
Psoriasis.....	1	.22	.....	1	.....	.....	.....
Painful scar.....	1	.22	.....	.....	.....	.....	1
Frontal sinusitis.....	1	.22	1	.....	.....	.....	.....
Ankylosis.....	1	.22	.....	1	.....	.....	.....
Hammer toes.....	1	.22	.....	1	.....	.....	.....
Metatarsalgia.....	1	.22	.....	1	.....	.....	.....
Chronic muscular rheumatism.....	1	.22	1	.....	.....	.....	.....
Undetermined disease.....	1	.22	1	.....	.....	.....	.....
Punctured wound.....	1	.22	.....	1	.....	.....	.....
Sprain of ankle.....	1	.22	.....	1	.....	.....	.....
Total cases.....	448	.....	55	281	7	26	79
Percentage of total cases.....	.....	100.00	12.28	62.72	1.56	5.80	17.63

Chart W.—Philippine Islands. American enlisted men.

[Admission, discharge, death, and noneffective rates for diseases having highest rates, year 1915.]

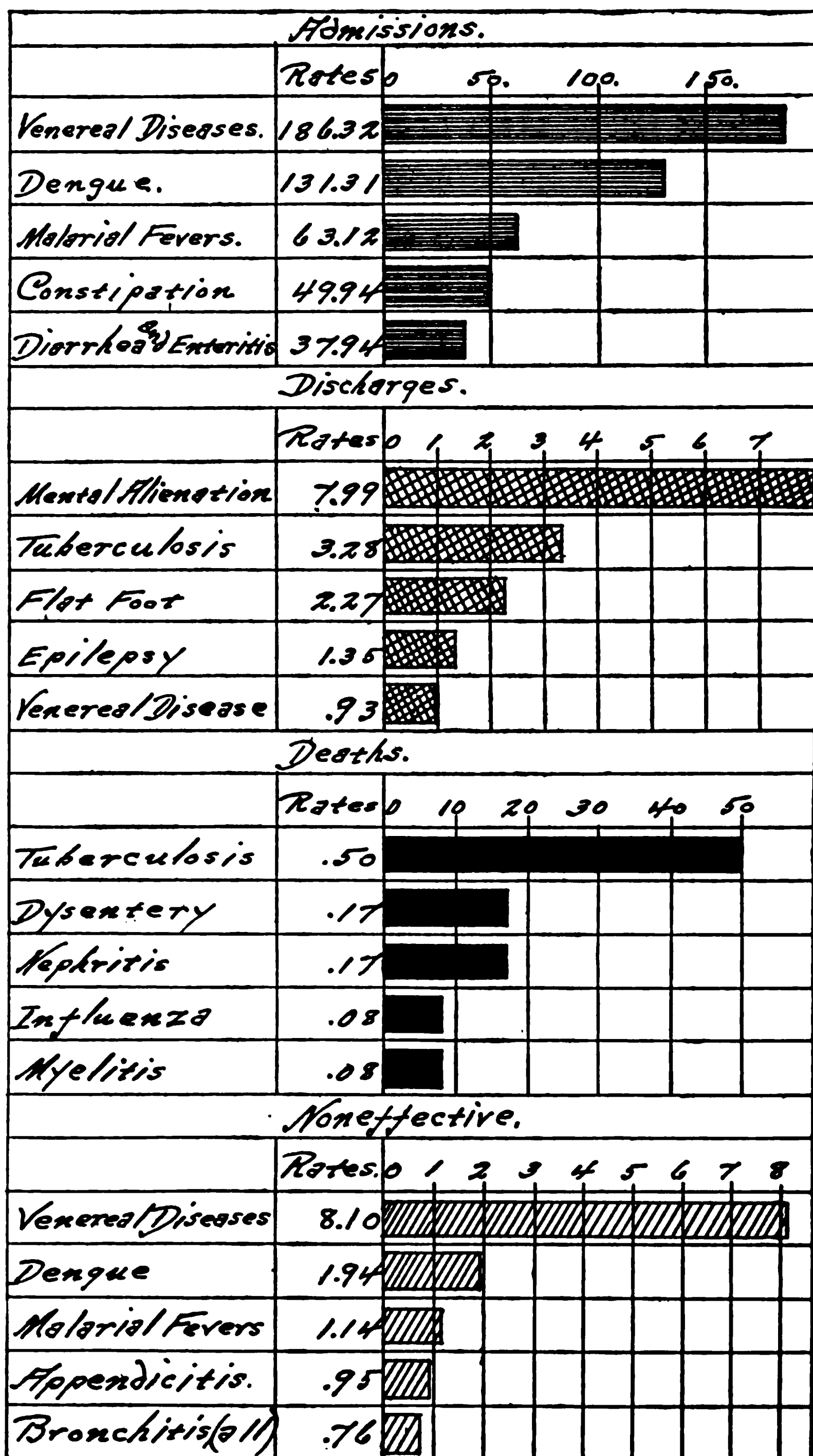
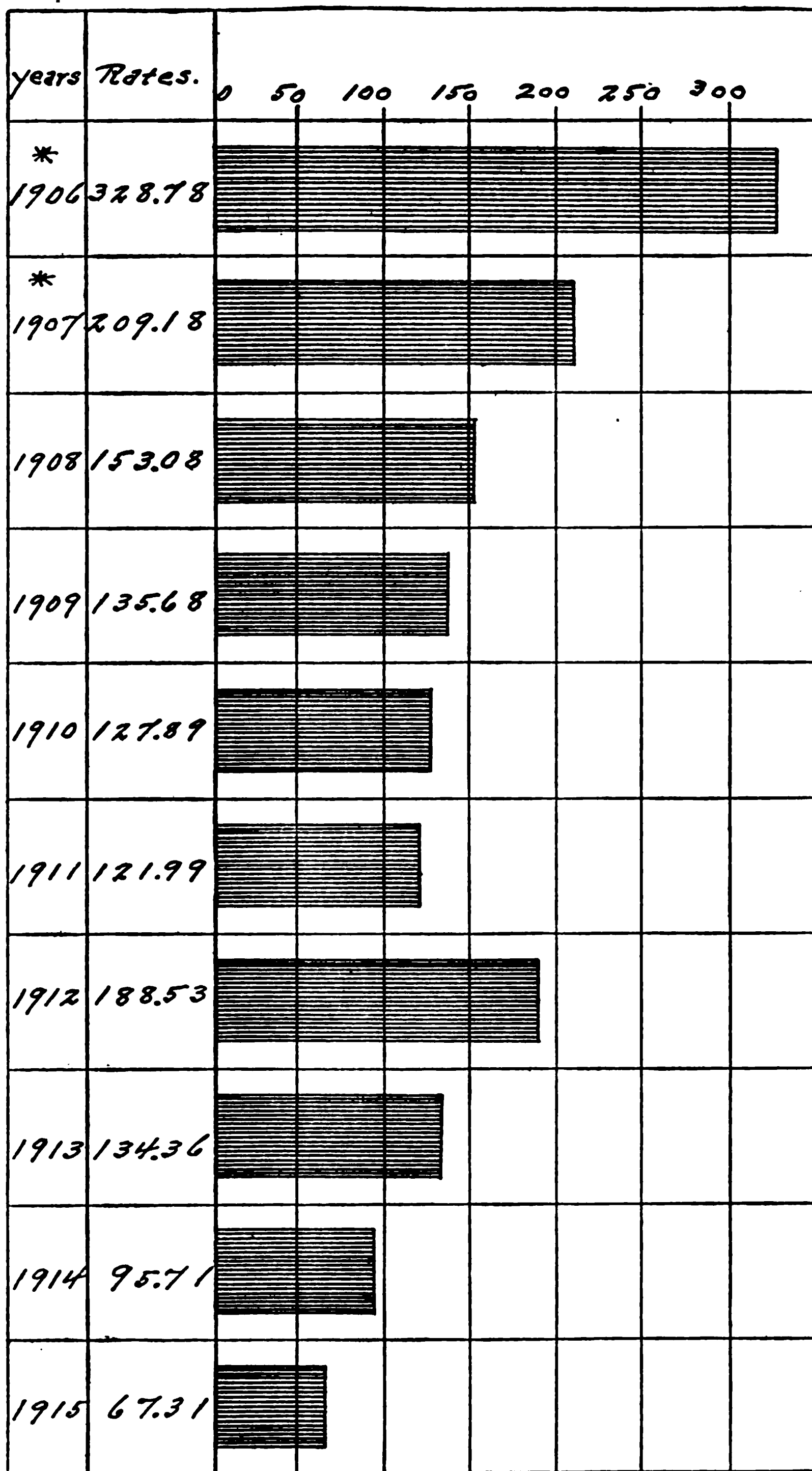


Chart X.—Philippine Islands. Officers and American and native troops.

[Admission rates for malarial fevers, years 1906-1915.]



* Enlisted men

* Officers not included.

Chart Y.—Philippine Islands. American and native enlisted men.

[Comparison of admission rates for malarial fevers, years 1906-1915.]

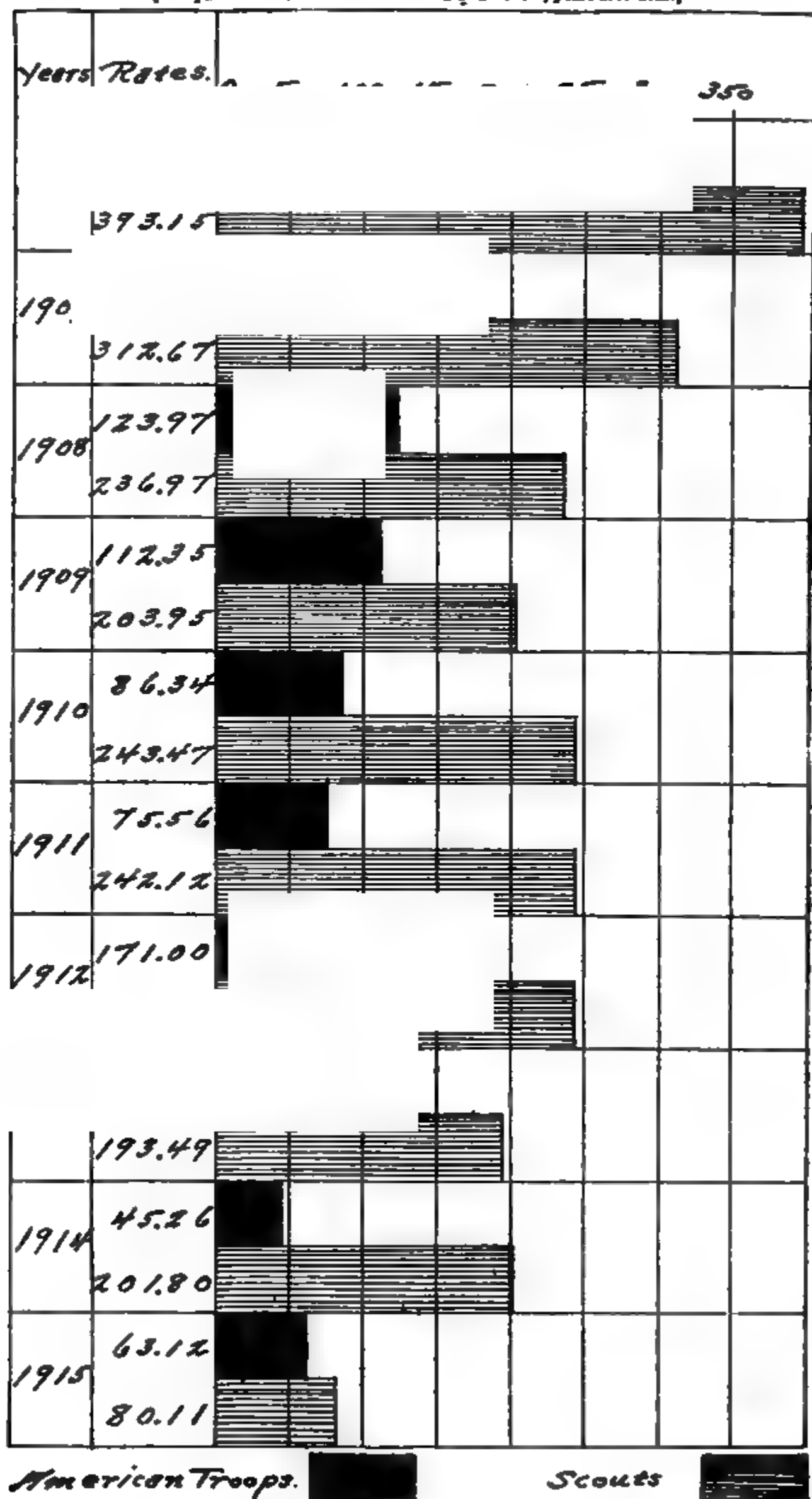


TABLE NO. 34.—*Posts in the Philippines having the highest admissions and non-effective rates per 1,000 of mean strength among all those having a total strength of over 200 officers and enlisted men, year 1915.*

Posts in order of highest admission rates from all causes.	Mean strength.	Ratio per 1,000 of mean strength.										Average number of days lost.					
		Admissions to sick report.		Discharged on certificate of disability.		Deaths.		Total losses.		Non-effective from sickness.				From all causes.		Excluding injuries, venereal diseases, alcoholism, and vaccinia.	
		From all causes.	Excluding injuries, venereal diseases, alcoholism, and vaccinia.	From all causes.	Excluding injuries, venereal diseases, alcoholism, and vaccinia.	From all causes.	Excluding injuries, venereal diseases, alcoholism, and vaccinia.	From all causes.	Excluding injuries, venereal diseases, alcoholism, and vaccinia.	From all causes.		Excluding injuries, venereal diseases, alcoholism, and vaccinia.		For each case.	For each soldier.		
										Total.	In hospital.	Total.	In hospital.				
																Total.	In hospital.
899	1,497.22	1,165.74	20.72	24.00	1.11	2.32	31.94	25.11	4.58	0.02	3.76	0.02	1.67	1.12	1.37	1.18	
030	1,294.58	879.31	19.71	17.63	.99	1.97	21.68	18.02	31.38	29.70	17.88	16.99	11.45	8.85	6.55	7.42	
646	1,030.96	526.32	14.33	12.74	1.56	3.10	17.43	14.29	27.06	25.32	12.63	11.77	9.88	9.58	4.01	8.78	
524	986.64	545.80	25.49	23.53	1.91	5.73	31.22	25.44	23.32	22.89	11.74	11.32	8.51	8.63	4.20	7.85	
006	947.14	597.74	22.67	19.92	1.06	3.32	25.99	21.86	23.30	22.77	13.32	12.99	8.51	8.96	4.86	8.13	
726	929.75	617.06	9.96	8.53	.....	1.28	11.34	8.53	25.84	25.59	12.66	12.91	9.79	10.53	4.95	8.08
079	622.14	465.70	23.64	21.12	.64	1.28	24.82	21.76	17.76	17.43	10.42	10.17	6.48	10.42	3.80	8.17	
337	902.06	709.20	12.45	13.35	2.97	5.96	18.26	16.32	26.97	27.62	20.63	19.64	10.57	11.73	7.53	10.02	
314	891.72	697.45	3.30	3.30	.....	3.18	6.43	3.30	17.15	15.22	13.38	12.19	6.26	7.02	4.88	7.00
533	890.79	639.78	1.95	1.95	3.75	7.50	9.45	5.70	30.41	29.86	22.52	22.07	11.10	12.81	8.22	12.85	
836	729.67	534.69	7.44	4.95	1.20	2.39	9.83	6.16	17.71	17.16	10.81	10.37	6.46	8.86	3.95	7.38	
909	603.96	403.96	12.66	11.42	.....	.....	12.56	11.42	12.54	12.32	10.34	10.19	4.68	7.58	3.77	7.64
462	508.06	306.10	.....	.....	.....	2.16	2.16	.....	12.16	11.66	8.89	8.61	4.44	8.72	3.24	8.19
646	490.71	291.64	8.04	6.43	.....	1.55	9.59	6.43	11.51	10.84	8.82	8.19	4.20	8.66	3.23	8.23
436	481.06	435.78	.....	.....	4.59	6.88	6.88	4.59	11.48	11.04	10.19	9.76	4.19	8.70	3.72	8.53
477	415.09	307.70	2.18	2.18	4.19	6.29	8.47	6.37	11.58	10.87	6.27	5.88	4.23	10.19	2.29	7.69	

INFLUENCE OF SEASON.

The highest admission and noneffective rates (all causes) occurred in July, being 116.65 and 33.59 per 1,000, respectively. Likewise, exclusive of injuries, venereal diseases, alcoholism, and vaccinia, which are not influenced by season, July had the highest admission rate, 88.33, with August running a close second, 87.82.

TABLE No. 35.—*Influence of season on American troops in the Philippine Islands, year 1915 (enlisted men).*

Months.	Mean strength.	Ratio per 1,000 of mean strength.									Prevailing diseases (exclusive of venereal diseases, etc.).
		All causes.						Exclusive of venereal diseases, alcoholism, vaccinia, and injuries.			
		Admissions.		Deaths.	Noneffective.		Admissions.	Deaths.	Noneffective.		
		Total.	Hospital.		Total.	Hospital.					
January.....	11,519	86.98	83.68	0.17	32.21	31.86	52.60	....	18.02	Malaria, 81; acute bronchitis, 67; tonsillitis, 35; dengue, 33.
February...	12,097	68.52	64.97	.24	30.75	30.35	39.26	0.08	17.96	Malaria, 49; tonsillitis, 38; acute bronchitis, 28; dengue, 21.	
March.....	12,626	71.99	68.27	.16	28.13	27.77	44.75	.16	16.52	Tonsillitis, 43; diarrhea and enteritis, 39; malaria, 38; acute bronchitis, 33.	
April.....	13,310	85.12	75.96	.39	30.85	29.87	55.97	.31	19.10	Malaria, 110; constipation, 63; tonsillitis, 44; acute bronchitis, 42.	
May.....	12,864	84.26	82.01	.15	31.56	31.03	54.02	.08	18.59	Malaria, 141; tonsillitis, 44; constipation, 44; diarrhea and enteritis, 39.	
June.....	12,566	84.19	79.82	.23	31.05	30.58	62.31	.08	18.95	Malaria, 118; constipation, 81; dengue, 71; diarrhea and enteritis, 50.	
July.....	12,464	116.65	104.78	.16	33.59	32.43	88.33	.08	21.73	Dengue, 408; constipation, 132; malaria, 63; diarrhea and enteritis, 59.	
August.....	11,990	112.43	98.25	.49	30.66	28.90	87.82	.25	19.68	Dengue, 473; constipation, 99; diarrhea and enteritis, 67.	
September..	11,153	88.85	85.18	.18	30.30	29.35	64.91	....	17.57	Dengue, 307; constipation, 52; diarrhea and enteritis, 48.
October.....	10,769	70.29	66.95	.19	23.98	23.50	45.41	.19	13.10	Dengue, 123; diarrhea and enteritis, 36; constipation, 34.	
November..	10,747	56.76	52.76	.20	20.88	20.75	33.59	.20	10.78	Dengue, 36; malaria, 30; tonsillitis, 24; diarrhea and enteritis, 23.	
December...	9,896	55.17	51.23	.30	23.25	23.01	29.51	....	10.74	Malaria, 38; tonsillitis, 25; diarrhea and enteritis, 25.
Total .	11,834	990.45	921.93	2.86	29.15	28.48	666.64	1.43	17.11	Dengue, 1,554; malaria, 747; constipation, 591; diarrhea and enteritis, 449; tonsillitis, 417.	

TABLE No. 36.—*Influence of disease on enlisted American troops, by arms of service, serving in the Philippine Islands, year 1915.*

Arms of service.	Mean strength.	Admitted for disease.	Discharged on certificate of disability.	Died.	Constantly noneffective.	Ratio per 1,000 of mean strength.			
						Admitted.	Discharged on certificate of disability.	Died.	Constantly noneffective.
Infantry.....	5,510	5,048	131	12	148.39	916.15	23.67	2.17	26.93
Cavalry.....	1,708	1,578	21	2	41.24	923.89	12.24	1.17	24.14
Coast Artillery.....	1,988	1,277	62	1	42.69	642.35	31.05	.50	21.47
Field Artillery.....	906	1,239	23	1	31.09	1,367.55	25.27	1.10	34.33
Engineers.....	340	300	7	.....	8.60	882.35	20.47	.....	25.30
Ordnance.....	78	35	1	1	1.19	448.72	12.82	12.82	15.24
Signal Corps.....	155	104	1	.....	2.44	671.01	6.41	.....	15.72
Hospital Corps.....	578	345	12	.....	9.41	596.89	20.65	.....	16.26
All others.....	571	382	4	1	15.77	669.00	6.97	1.74	27.63
Total.....	11,834	10,308	262	18	300.82	871.05	22.04	1.51	25.43

PHILIPPINE SCOUTS.

The health of the troops (native) in the Philippines for the year 1915 was very good, being a marked improvement over that for the year 1914. The mean strength of these troops during the year was 5,505, as compared with 5,020 during 1914.

ADMISSIONS.

During the year there were 3,159 admissions for all causes, with a case admission rate of 573.84 per 1,000, as compared with 3,585 admissions and a case admission rate of 714.14 per 1,000 for the year 1914.

The rate for disease for 1915 was 482.65 and that for injury 91.19 per 1,000 as compared with 618.33 for disease and 95.82 for injury in 1914.

The following tabulation gives the admission rates for some of the principal diseases in 1915 as compared with the year 1914:

	1915	1914
Malarial fevers.....	80.11	201.80
Diarrhea and enteritis.....	37.60	26.49
Venereal diseases.....	34.33	57.57
Bronchitis.....	28.52	24.50
Dengue.....	16.71	5.58
Dysentery.....	9.99	8.96
Ankylostomiasis.....	9.45	16.53
Tuberculosis (all).....	4.54	6.57

CONSTANTLY NONEFFECTIVE RATES.

The constantly noneffective rate for 1915 was 15.68 per 1,000, as compared with 20.30 in 1914. The rate for disease was 13.31 per 1,000 in 1915, and 17.48 in 1914, while that for external causes was 2.37 per 1,000 in 1915 and 2.82 in 1914.

The following tabulation shows the noneffective rates for the principal diseases in 1915 as compared with 1914:

	1915	1914
Venereal diseases.....	1.96	3.66
Malarial fevers.....	1.54	3.48
Acute abscess and cellulitis.....	1.05	.79
Tuberculosis (all).....	.58	.82
Dysentery.....	.56	.39
Furuncle and carbuncle.....	.48	.62
Bronchitis.....	.48	.60
Diarrhea and enteritis.....	.45	.30
Ankylostomiasis.....	.19	.46
Mumps.....	.17	.41
Rheumatism, articular.....	.03	.23

SPECIAL DISEASES.

TYPHOID FEVER.

There were no cases of this disease among the Philippine Scouts.

MALARIAL FEVERS.

The admission rate for all fevers of this class was 80.11 per 1,000, as compared with 201.80 in 1914 and 193.49 in 1913. This rate is the lowest in the history of the Philippine Islands, an evidence of the persistent and vigorous antimosquito campaign that is being waged. Certain posts in the Philippines, however—notably Camp Stotsenburg, Pampanga—continue to show high admission rates for malaria. This post is not properly screened, in spite of repeated recommendations. The same statement is true of other Army posts. The relation of mosquitoes and other insects to disease incidence is now so well known that to defer the matter of complete screening of all quarters in the Army is inexcusable. "Lack of funds" or "insufficient appropriations" for this important work should no longer be accepted and the responsibility for this serious defect definitely placed.

TYPHUS FEVER.

There were 3 cases of this disease among native troops at Camp Keithley, Mindanao, where last year an epidemic resulted in 24 cases, 18 among the scouts and 6 civilians. A special report on the epidemic occurring in 1914 was made to the Surgeon General, and the article was considered of sufficient importance to publish it in the Archives of Internal Medicine, September, 1915.

VENEREAL DISEASES.

These diseases furnish an admission rate of 34.33 per 1,000, as compared with 57.57 in 1914, a marked reduction. Of a total of 189 admissions, 31 were for syphilis, 17 for chancroid, and 141 for gonorrhea, as compared with 45, 34, and 210, respectively, for 1914. The noneffective rate for all venereal diseases was 1.96, as compared with 3.66 per 1,000 in 1914.

SMALLPOX.

No case occurred during the year.

CHOLERA.

Two cases of this disease occurred during the year, with one death. An epidemic occurred at Tamparan and the immediate vicinity of Camp Keithley, Mindanao, resulting in 20 deaths among the civilian population. This epidemic seemed to be continuous with the one that had been traveling through the island of Mindanao during the year 1915. The disease appeared at Tamparan during the last week of November in a company of Constabulary soldiers recently brought there from Gannassi.

TUBERCULOSIS.

There were 25 cases of this disease, with an admission rate of 4.54 per 1,000, as compared with 33 cases and an admission rate of 6.57 in 1914. There were no deaths, all being discharged.

DYSENTERIES.

Fifty-five admissions for this disease during the year, of which number 21 were classed as bacillary, 28 as entamoebic, and 6 unclassified. The rate for this disease was 9.99, as compared with 8.96 for 1914. The noneffective rate was 0.56 per 1,000. One death resulted in the unclassified.

DENGUE.

Dengue, or "breakbone fever," is an acute disease of tropical and subtropical countries, characterized by severe pains in the muscles and joints and by an eruption similar to measles. The mortality is practically nil. It has been demonstrated that it is transmitted by the *Culex fatigans* species of mosquito.

Ninety-two cases of this disease occurred among the native troops, with an admission rate of 16.71 per 1,000 and a noneffective rate of 0.28. There were no deaths.

DIARRHEA AND ENTERITIS.

Two hundred and seven cases occurred, making an admission rate of 37.60 per 1,000, as compared with a rate of 26.49 in 1914. The noneffective rate was 0.45.

ALCOHOLISM AND ITS RESULTS.

But one admission is recorded for this disability, the admission rate being 0.18 per 1,000.

BERI BERI.

No case of this disease occurred among the scouts during the year.

UNDETERMINED FEVERS.

There were 32 cases of undetermined fevers during the year. Under this heading are included febricula, simple, continued, and other fevers of undetermined causation. The admission rate was 5.81 per 1,000, as compared with 3.78 in 1914.

The following table exhibits the various surgical operations performed on the Philippine Scouts during the year:

TABLE No. 40.—*Surgical operations performed on Philippine Scouts, year 1915.*

Operation.	Disease or injury.	Cases.	Result.				Anesthetic.			
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Local.	None.
EYE.										
Transplantation.....	Pterygium.....	7	7	.....	.....	.....	.....	1	6	.....
Incision and drainage.....	Dacryocystitis.....	1	1	.....	.....	.....	.....	.....	1	.....
Do.....	Chalazion.....	1	1	.....	.....	.....	.....	.....	1	.....
NOSE.										
Amputation anterior end right middle turbinate.	Frontal sinusitis.....	1	1	.....	.....	.....	.....	.....	1	.....
MOUTH AND PHARYNX.										
Incision of abscess.....	Alveolar abscess.....	1	1	.....	.....	.....	.....	.....	1	.....
Tonsillectomy.....	Hypertrophy of tonsil.....	4	4	.....	.....	.....	.....	.....	4	.....
Do.....	Tonsillitis.....	2	2	.....	.....	.....	.....	.....	2	.....
THORAX.										
Aspiration.....	Pleurisy.....	1	1	.....	.....	.....	.....	.....	.....	1
ABDOMEN.										
Thora-laparotomy, tenth rib....	Abscess of liver.....	1	1	.....	.....	.....	.....	1	.....	.....
Appendectomy, 1; laparotomy and drainage, 1.	Appendicitis.....	2	2	.....	.....	.....	.....	2	.....	.....
Laparotomy exploratory.....	Penetrating wound of abdomen	1	1	.....	.....	.....	.....	1	.....	.....
Laparotomy.....	Punctured wound.....	1	.....	.....	.....	1	.....	1	.....	.....
Bassini's operation.....	Inguinal hernia.....	4	4	.....	.....	.....	.....	4	.....	.....
ANUS AND RECTUM.										
Incision and drainage.....	Ischio-rectal abscess.....	1	1	.....	.....	.....	.....	1	.....	.....
Incision and drainage, 1; sphincter dilated, tract laid open and curetted, 1.	Fistula in ano.....	2	2	.....	.....	.....	.....	2	.....	.....
Incision and evacuation of blood clot.	Hemorrhoids.....	1	1	.....	.....	.....	.....	.....	1	.....
GENITO-URINARY SYSTEM.										
Incised and punctured.....	Epididymitis gonorrheal.....	1	1	.....	.....	.....	.....	1	.....	.....
Epididymotomy.....	Epididymitis.....	2	2	.....	.....	.....	.....	.....	2	.....
Jaboulay's operation.....	Hydrocele.....	1	1	.....	.....	.....	.....	.....	1	.....
Circumcision.....	Phimosis.....	3	3	.....	.....	.....	.....	.....	3	.....
SKIN AND CELLULAR TISSUE.										
Incision and drainage, 73; incision and curetment, 2.	Abscess.....	75	75	.....	.....	.....	.....	2	39	34
Incision and curetment, 2; excision, 1; curetment and cauterization, 1; incision and drainage, 4.	Carbuncle.....	8	8	.....	.....	.....	1	1	3	3
Incision and drainage.....	Cellulitis.....	20	20	.....	.....	.....	.....	2	14	4
Excision, 5; partial excision, 1; Cotting's operation, 1; removal of nail, 1.	Ingrowing toe nail.....	8	8	.....	.....	.....	.....	.....	8	.....
LYMPHATIC SYSTEM.										
Incision and curetment, 1; incision and drainage, 5.	Adenitis inguinal venereal.....	6	6	.....	.....	.....	.....	1	3	2
Incision and drainage.....	Adenitis inguinal nonvenereal.	3	3	.....	.....	.....	.....	1	2	.....
MUSCLES, TENDONS, ETC.										
Excision.....	Ganglion.....	1	1	.....	.....	.....	.....	.....	1	.....

¹ Patient died 6 hours after operation.

TABLE No. 40.—Surgical operations performed on Philippine Scouts, year 1915—Contd.

Operation.	Disease or injury.	Cases.	Result.				Anesthetic.			
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Local.	None.
BONES.										
Depressed fracture raised and loose bone removed.	Depressed fracture of skull....	1	1	....	....	....	....	1	....	....
Freshening and resetting fractured ends of bones.	Fracture simple, both bones, forearm.	1	1	....	....	....	....	1	....	....
Wound enlarged, fractured bone removed and wound closed.	Fracture, compound, comminuted, tibia and fibula.	1	1	....	....	....	....	1	....	....
Resection one-fourth distal end proximal phalanx.	Non-union old fracture.....	1	1	....	....	....	....	....	1	....
Incision and drainage.....	Periostitis.....	2	2	....	....	....	....	....	2	....
JOINTS.										
Incision and drainage.....	Arthritis, knee, gonorrheal....	1	1	....	....	....	....	....	1	....
AMPUTATIONS.										
Amputation of finger.....	Periostitis.....	1	1	....	....	....	....	....	1	....
Do.....	Gunshot wound.....	1	1	....	....	....	....	1	....	....
FOREIGN BODIES.										
Extraction.....	Piece of lead.....	1	1	....	....	....	....	....	1	....
TUMORS.										
Excision.....	Fibroma.....	4	4	....	....	....	....	1	3	....
Do.....	Lipoma.....	1	1	....	....	....	1	....	....	....
Excision, 7; incision and drainage, 3.	Sebaceous cyst.....	10	10	....	....	....	....	....	9	1
Excision.....	Tumor, type not stated.....	1	1	....	....	....	....	....	1	....
MISCELLANEOUS OPERATIONS.										
Suturing.....	Incised wound.....	1	1	....	....	....	....	....	....	1
Incision and drainage.....	Punctured wound.....	5	5	....	....	....	....	....	3	2
Total number of cases.....		191	190	....	....	1	2	26	115	48

INFLUENCE OF SEASON.

Excluding injuries, venereal diseases, alcoholism, and vaccinia, as uninfluenced by the seasons, the highest admission rate was in June and the lowest in October.

The highest noneffective rate for the same was in June and the lowest in November. The highest rate for malarial fevers was in May.

TABLE No. 41.—*Influence of season on Philippine Scouts, year 1915.*

Months.	Mean strength.	Ratio per 1,000 of mean strength.									Prevailing diseases (exclusive of venereal diseases, etc.).
		All causes.						Exclusive of venereal diseases, alcoholism, vaccinia, and injuries.			
		Admissions.		Deaths.	Noneffective.		Admissions.	Deaths.	Noneffective.		
		Total.	Hospital.		Total.	Hospital.					
January.....	5,441	55.14	53.85	0.18	18.36	18.03	43.19	0.18	12.96	Malaria, 55; acute bronchitis, 16; diarrhea and enteritis, 13; constipation, 12.	
February...	5,445	47.94	45.92	....	16.04	15.77	36.73	....	11.08	Malaria, 55; diarrhea and enteritis, 25; acute abscesses, 13.
March.....	5,480	48.00	47.45	....	16.25	15.99	38.51	....	11.98	Malaria, 54; constipation, 20; acute bronchitis, 19; diarrhea and enteritis, 17.
April.....	5,444	48.68	47.21	.18	14.17	13.83	39.49	....	10.44	Malaria, 50; constipation, 24; diarrhea and enteritis, 17; acute bronchitis, 15.
May.....	5,456	50.40	50.04	.55	15.35	15.06	40.32	.37	11.33	Malaria, 73; diarrhea and enteritis, 26; constipation, 13.	
June.....	5,431	60.95	58.74	.18	17.41	17.05	51.92	.18	13.10	Malaria, 56; autointoxication, 26; dengue, 28; acute bronchitis, 27.	
July.....	5,487	53.76	52.31	....	15.09	14.84	44.47	....	12.54	Constipation, 35; malaria, 25; dengue, 19; diarrhea and enteritis, 19.
August.....	5,463	42.47	41.37	.18	14.86	14.67	32.58	.18	11.34	Constipation, 19; malaria, 16; acute bronchitis, 15.	
September..	5,513	43.53	42.08	.36	14.62	14.32	29.93	.18	10.04	Constipation, 15; diarrhea and enteritis, 14; malaria, 13; acute abscesses, 12.	
October.....	5,601	39.64	38.03	.36	15.71	15.39	28.21	.36	10.95	Acute bronchitis, 15; constipation, 15; malaria, 13; acute abscesses, 13.	
November..	5,621	42.16	40.38	.18	14.41	14.03	30.60	.18	9.29	Diarrhea and enteritis, 22; malaria, 15; constipation, 14; acute bronchitis, 12.	
December...	5,675	41.94	40.53	.35	15.90	15.39	31.89	....	10.74	Constipation, 27; diarrhea and enteritis, 18; acute abscesses, 17; malaria, 16.
Total.	5,505	573.84	557.13	2.54	15.68	15.37	447.05	1.63	11.32	Malaria, 441; constipation, 221; diarrhea and enteritis, 207; acute bronchitis, 156.	

PREVALENCE OF DISEASES, BY RACES.

With the exceptions of diarrhea and enteritis, furunculosis, malaria, conjunctivitis, trichophytosis, dysentery, and intestinal parasites, the rates for the Philippine scouts were all lower than for either the white or colored American troops. It should be borne in mind that the native troops are serving in their own country under conditions natural to them, to which American troops are not accustomed.

The rates for the American white and colored troops and Scouts are compared in the following tabulation:

	White.	Colored.	Scouts.
Admission rate.....	954.85	1,272.93	573.84
Noneffective rate.....	28.20	36.57	15.68
Death rate.....	2.46	5.97	2.54
Discharge rate.....	23.79	18.64	11.44

TABLE NO. 42.—*Important diseases by races, Philippine Islands, year 1915.*

Diseases.	Admission rates.					
	White troops.		Colored troops.		Philippine Scouts.	
	1915	1914	1915	1914	1915	1914
Venereal.....	105.81	174.79	136.30	233.76	34.33	57.57
Tonsillitis (all).....	67.24	27.83	32.91	16.50	7.08	2.19
Bronchitis (all).....	35.06	32.72	36.87	26.62	28.52	24.50
Influenza.....	35.06	2.75	22.40	.....	1.63	.....
Diarrhea and enteritis.....	31.87	68.78	26.19	37.81	37.60	26.49
Furunculosis.....	17.01	25.79	8.62	11.71	19.62	29.88
Malaria.....	15.90	48.60	7.75	30.35	53.77	201.80
Alcoholism.....	14.34	25.67	6.89	6.39	.18	.60
Dengue.....	14.06	34.15	68.75	28.75	16.71	5.58
Appendicitis.....	8.84	13.73	7.24	3.73	.73	.60
Hemorrhoids.....	5.53	6.09	10.86	12.25	.18	.60
Articular rheumatism (acute and chronic).....	4.94	3.34	3.27	1.06	.54	3.39
Conjunctivitis.....	4.04	5.85	5.51	3.19	12.17	8.76
Trichophytosis.....	3.98	10.63	3.62	15.44	9.08	16.93
Tuberculosis.....	3.44	6.45	4.65	11.18	4.54	6.57
Pneumonia (lobar).....	2.34	.96	3.45	.53	2.00	1.59
Dysentery.....	2.06	12.66	.52	14.38	9.99	8.96
Intestinal parasites.....	1.06	2.03	.69	.53	5.99	10.76

SANITATION IN THE PHILIPPINE ISLANDS.

The department surgeon, Philippine Department, reports as follows:

AUGUR BARRACKS, JOLO.

This station shows a marked decrease in admissions on account of malaria and a slight decrease in the number of venereal cases.

The surgeon reports:

"Malaria, reported by my predecessors and continued by myself until I could verify or disprove it, as the chief disease here, does not in the light of over 300 blood examinations appear to prevail so extensively as stated * * * November 1, two companies, on surgeon's recommendation, stopped taking quinine. Their bloods (204 cases) were all examined between November 20 and December 12, without finding the plasmodium. The number of admissions, all cases from these two companies, were 13 in November as against 14 for the preceding month. In addition, all admissions to the medical ward had from two to four blood examinations, and only five times was the plasmodium found in the entire command."

He adds that the studies along this line will be continued, and a report will be made should the results show any cause for a change of opinion.

The usual antimosquito measures are carried out at the post.

He remarks with reference to the venereal problem:

"The venereal diseases constitute a large factor in the morbidity. There is evidently much clandestine prostitution, and the native soldier does not yet understand the seriousness of the venereal disease and the value of prompt prophylaxis after exposure. Prophylaxis stations and short, frequent lectures regarding the same and the necessity of early prophylaxis after exposure are employed to combat venereal disease."

During May and June cholera was epidemic in the adjacent barrios and throughout the island, but only two cases, with one death, occurred among troops.

Bacillary dysentery appears from time to time. This is attributed by the surgeon to contact infection from the civil population, in which the disease appears to be ever present.

CAMP ELDRIDGE, LAGUNA.

This post shows a decided improvement in the morbidity on account of malaria and a marked increase in the venereal diseases.

The usual antimalarial measures have been carried out.

The surgeon reports as follows with reference to antivenereal procedures:

"The special steps that have been taken to control venereal diseases are: Treating in hospital all syphilitic cases in the infectious stage and isolation in post of all other venereal cases; providing venereal prophylactic; disciplinary measures instituted in all cases of venereal disease where failure to take venereal prophylaxis is shown; lectures by medical officers given to the command on personal sanitation; the source of all cases of venereal disease sought out and the woman's name submitted to the authorities of Los Banos for isolation and treatment; semimonthly inspection of the command by medical officers."

CAMP JOHN HAY, BENGUET.

The surgeon reports skin diseases due to the wearing of "G" strings and foot injuries due to going barefooted. The uniform of Igorot scouts has now been changed to conform to that of other scout soldiers, and they now wear breeches, leggings, and shoes as a part of the uniform.

CAMP KEITHLEY, MINDANAO.

An epidemic of measles appeared at the post in October following the arrival of the Forty-seventh Company of Philippine Scouts from Fort Mills, where the disease had been more or less prevalent.

There is very little venereal disease at the post. The surgeon reports that existing orders relating to the prevention of this class of diseases are strictly complied with.

There has been a decided decrease in the malarial rate over that of the previous year. The surgeon reports the following measures for the control of the disease.

1. The constant use of mosquito bars in barracks and hospital, the bars being lowered at 4 p. m. daily.

2. Routine blood examinations of all cases of whatever nature admitted to hospital.

3. All positive cases kept in hospital and under treatment for at least one week, subsequent daily observation with treatment for two weeks, and weekly observation for a period of three months thereafter.

The surgeon again calls attention to the unfortunate condition at the post resulting from the large civilian population thereat, members of families of native soldiers, for whom no adequate accommodations are provided. This matter was referred to in the last annual report from this office, and the comment appears on page 113 of the annual report of the Surgeon General for 1915.

CAMP M'GRATH, BATANGAS.

The prevailing diseases have been dengue and venereal troubles.

The records show a considerable reduction in both venereal diseases and malaria over the rates for the preceding year.

The post authorities have cooperated with those of the neighboring municipality of Batangas in the matter of the general sanitation of the latter, and also with reference to the venereal problem.

The surgeon reports as follows with reference to measures against the venereal diseases:

"The name and address of the woman, or the license number of the house and inmate, with the time of intercourse, are recorded on prophylaxis cards. When a man contracts a venereal disease the woman is examined by an Army medical officer, and if positive, she is quarantined by the municipal health department until the health officer is notified by an Army medical officer that she is cured, the necessary examinations being made at the post hospital. The Japanese prostitutes are examined and certified to by the surgeon. There has been a marked improvement under this plan. In addition to the prophylaxis station at the hospital, a separate one is maintained at the corral, which is located practically on the outskirts of the town, thus affording the opportunity for prompt treatment. Men who contract these diseases are kept on sick report until danger of dissemination thereof has passed. Those failing to take the prophylactic are court-martialed."

CAMP STOTSENBURG, PAMPANGA.

Notwithstanding the efforts of the post authorities the admissions to sick report on account of both malaria and the venereal diseases have been greater than for the preceding year.

The surgeon reports as follows:

"The most marked sanitary defect has been the absence of screens in barracks and quarters. Also the scout post is located in an infected area, and troops quartered there have shown a high malarial incidence.

"A very active antimosquito war has been constantly waged, and the grass, brush, and undergrowth have been cut for a wide area about the post. * * * All ditches are kept open, all holes are filled, ditches and moist places are petrolized, and breeding places are constantly sought."

With reference to the venereal problem he remarks:

"Most of the cases come from Angeles, a town 6 miles distant, and in which there is no adequate regulation of prostitution. A model or sanitary barrio is situated about 1 mile from the post and which is countenanced. Records kept of venereal admissions show relatively few venereal cases originating in this barrio. The prostitutes who are unable, on account of venereal disease, to secure admission to this barrio become inmates of houses of prostitution in Angeles, and those who become diseased in this barrio, and are not permitted to operate there, immediately go to Angeles and continue their operations unmolested."

FORT MILLS, CORREGIDOR, AND SUBSTATIONS.

At this group of stations there have occurred at various times during the year among the population cases of mumps, measles, dengue, whooping cough, smallpox, cholera, and all the venereal diseases. The one case of cholera occurred in a native employee

at Fort Hughes (Caballo Island). One case of smallpox developed in a native civilian employee at Fort Drum (El Fraile Island) and one of varioloid in a Coast Artillery soldier at Fort Mills.

There has been an increase in both venereal diseases and malaria over the rate for the preceding year, the latter increase being a very decided one.

The surgeon reports:

"All regulations complied with in regard to venereal diseases and malaria fever."

He also reports that during the year sewage and drainage systems have been greatly improved, and that sanitary conditions at this post (Fort Mills proper) are good.

FORT SAN PEDRO, ILOILO.

This post shows a very decided reduction in the admission rate for both malaria and venereal diseases over the figures for those diseases for the preceding year. The venereal rate is still high for a station garrisoned by native troops, but is far below that for any of the American garrisons, being 77 per thousand as against 214.7 for the year 1914.

The methods reported by the surgeon in handling both the malarial and venereal problems are well planned and appear to have been carefully carried out, and with good results.

FORT WILLIAM M'KINLEY, RIZAL.

The prevailing diseases during the year have been venereal, dengue, digestive disorders, and cutaneous troubles. The venereal rate has been somewhat reduced, but is still high. Prophylactic measures are conscientiously carried out at the post, and the various prophylactic stations in Manila cooperate with the authorities of this and other stations in the vicinity, but the proximity of a large oriental city makes the problem a difficult one. The malarial rate is low and shows a considerable reduction over that of last year. The surgeon reports that most of the cases coming under treatment have been contracted in other localities.

Two cases of diphtheria, with one death, have occurred in enlisted men during the year, and several cases have occurred among the civilian population of the post.

The sewage disposal system has given trouble, and a new plant is under consideration, and plans therefor have been prepared. The surgeon reports that the trouble, due to lack of capacity of the tank, has been remedied by allowing the sewage to pass directly into the Pasig River. Inasmuch as either bank is dotted with habitations, singly and in barrios, and since the river passes through the city of Manila a few miles farther down, this is a most undesirable expedient.

LUDLOW BARRACKS, MINDANAO.

Malaria has been the prevailing disease at this post during the year. There was also an epidemic of mumps. There has also been a considerable amount of cholera and smallpox in the immediate vicinity of the post, but no cases of either at the station.

This post shows the highest admission rate for malaria of any station in the department, but the rate per thousand has been cut down from 791.3 in 1914 to 220.4 for 1915. The surgeon reports the following as the measures for the control of the disease:

1. Prompt isolation and treatment in hospital of all cases.
2. Weekly administration of 1 gram quinine in solution to every man of the command.
3. Daily administration of quinine to all cases of malaria for six weeks after return to duty.
4. All barracks and quarters screened, and the general use of the mosquito bar is enforced.
5. Grass cutting and drainage of standing water in constant progress.
6. Standing water incapable of drainage oiled weekly by details from the hospital.

Only 13 new venereal cases were taken up during the year. The surgeon reports that there has been no case of chancroids and no new cases of syphilis during the time. Prophylaxis, semimonthly inspections, and hospital treatment are the preventive measures in force.

The surgeon reports the following as the sanitary defects at the post:

1. Water in mains drawn from Nituan River, and highly infected, is used for bathing and washing.
2. Swampy section in northeast corner of post.
3. Six pail closets, remaining from old system of disposal of excreta, still in use.

4. The great extent of the post, necessitating a large amount of work in keeping cogon grass and other undesirable vegetation under control.

With reference to the correction of these defects, the surgeon states as follows:

"1. An artesian well-drilling outfit is at work on the post, and it is expected that a supply of artesian well water will eventually be available for use in the mains.

"2. A reduction of the area of the swamp referred to by drainage by post labor has been effected, and the work is being continued to the extent of keeping open the ditches. He believes that further improvement is possible only by extensive filling at a cost which would probably be prohibitive, and certainly so under present conditions.

"3. Plans have been prepared and estimates made and forwarded for the replacement of all sanitary pails by water-closets."

CITY OF MANILA.

The following stations are located within the city limits: Cuartel de Espana, Cuartel de Infanteria, department hospital, Fort Santiago, medical supply depot, Manila ordnance depot, and quartermaster's depot.

Of these stations, Cuartel de Espana has normally a garrison consisting of regimental headquarters and a battalion of Infantry.

Fort Santiago (department headquarters) has one company of Infantry as a headquarters guard, one company of signal corps is quartered at Cuartel de Infanteria, a detachment of ordnance at the Manila Ordnance Depot, and detachments of the Hospital Corps at the department hospital and medical supply depot.

In general terms, and with the restriction that they are under military control, it may be said that the sanitary conditions of these stations are those of the city, and the sewer systems, general water supply, and environment are those of the city. The department hospital is practically the post hospital for all, as only dispensaries are maintained at the individual stations.

Stations for venereal prophylaxis have been established at the department hospital, and the dispensaries at Cuartel de Espana and Fort Santiago where treatment can be obtained at all hours, not only by the enlisted men stationed in the city, but also by those on pass in Manila from Fort McKinley, Fort Mills, and other posts in the vicinity. The existence of these stations is officially made known to the members of the commands of such posts, and form part of the prophylactic system thereof, cards from the stations referred to being forwarded to the surgeon of the command to which the man belongs.

At Cuartel de Espana, the only station of the group having a garrison of any considerable size, the venereal rate is somewhat higher than for the previous year (226.2 per 1,000 as against 203.4). From March to October, 1915, the garrison consisted of colored troops. The usual methods have been followed with reference to venereal diseases, and all orders and instructions relating thereto have been carried out. The rate of admissions on account of malaria has been greatly reduced. Mosquito destruction, use of mosquito bars, and the segregation and following up of cases being the methods employed for its control.

In common with other stations of the Manila group, dengue has been the prevailing disease, the principal epidemic occurring during the months of July and August, with occasional cases throughout the year.

An artesian well between seven and eight hundred feet in depth has recently been bored at Cuartel de Espana, and a covered steel tank of 10,000 gallons capacity with the necessary pumping machinery has been installed. The purpose of this well is to supply not only Cuartel de Espana but the entire military population of Manila with potable water to replace distilled water should the plan prove satisfactory. The water from this well has a slightly saline, or more properly "mineral," taste so common in waters from wells of this character. When taken directly from the well it gives a bacterial count of about 60 colonies per cubic centimeter, with no gas producers. The water in the tank later showed a bacterial count of 20,000, and from the outlet pipe 60,000 per cubic centimeter, with no gas producers. The matter of disinfection of the tank was turned over to Maj. Carl R. Darnall, Medical Corps, and on November 30 he put into it a solution of hypochlorite of lime containing sufficient available chlorine to give a concentration of about 16 parts per million in the 10,000 gallons of water in the tank. This strongly chlorinated water was allowed to remain for 48 hours. The water was then drained out and the tank refilled on December 2, 1915, and the water allowed to stand. The first sample from this filling was taken December 3 and gave a count of 5,500 per cubic centimeter. The second sample of the same water taken December 4 gave a count of 50,000 per cubic centimeter. The third sample taken on December 6 gave a count of 30,000. The fourth and last sample from this filling

was taken December 7, five days after the tank was filled, and gave a count of 550,000 per cubic centimeter. No gas producers in any of the samples. The tank was then emptied and refilled, and a sample taken 24 hours later gave a count of 25,000 per cubic centimeter. This was likewise free from gas producers.

To observe the action of the water under service conditions the water was drawn off during the forenoon of December 8 and refilled during the afternoon, and the process repeated for the six succeeding days, samples being taken while the tank was being emptied. These samples gave respective counts as follows: December 10, 55,000; December 11, 40,000; December 13, 20,000; December 14, 23,000. No gas formers were present in any sample.

The bacteriological work was done at the department laboratory by Capt. W. H. Allen, Medical Corps.

In submitting his report, Maj. Darnall comments as follows:

"From this series of tests it appears probable that the few harmless bacteria in the water as it comes from the well rapidly multiply in the tank, which, when warmed by the sun, acts as a very efficient incubator. Hence a high bacterial count in the water taken at the outlet 24 or more hours after filling the tank is of no significance in itself. It shows, however, that the water contains substances on which the bacteria (of the kind found) grow readily, and the possibility of pathogenic germs doing the same, should they by chance gain access to the tank, must be considered."

He further comments on the possibility of contamination during the process of delivery.

On December 21, 1915, after consultation with Maj. Darnall, the department surgeon transmitted to the department commander the report referred to, with the following comment:

"2. The inference to be drawn from the results of the very thorough study which Maj. Darnall has made of the subject is that the water of the well is potable, but that it is of a character which favors the rapid growth of bacteria, and that it will require exceptional care in handling. The bacteria which have already been found are in themselves harmless, but their rapid multiplication affords an index of what would happen in the event of the infection of any part of the system of supply by the accidental introduction of the organisms of cholera, typhoid fever, or other water-borne diseases.

"3. If proper precautions are taken and unceasing vigilance is exercised, it is believed that this well can be safely used as a source of supply, but in the event of its being so used, the danger of careless handling should be thoroughly understood by all who are responsible for its distribution.

"4. I recommend that the well be put in use, and that pumping be regulated by the daily requirements in order that surplus water be not allowed to accumulate; that water wagons and utensils used in distributing be frequently sterilized by steam; and that all possible precautions be taken in handling the water. I further recommend that samples of water from the tank, service pipe, and water wagons be collected weekly and sent to the department laboratory for examination."

Water from the well has recently been supplied with more or less regularity, and the matter is still under investigation, additional samples being taken for examination from water coolers and other places of terminal distribution. Certain complaints from consumers have been personally made to the writer, but these ordinarily refer to the taste of the water, which is appreciable to persons accustomed to the use of distilled water. In this respect it is considered that the Cuartel de Espana water is equal to or superior to that furnished by the artesian wells at Fort McKinley.

A new distilling plant is being installed by the Quartermaster Department at its depot to replace the one now in use. This will be held in reserve for use should the well water become infected or be finally considered unfit for use.

A second artesian well is now being bored at the department hospital.

PETIT BARRACKS, MINDANAO.

The surgeon reports that there have been no prevailing diseases during the year. A slight outbreak of dengue occurred in June. Venereal diseases have been rare. There has been a marked decrease in the malarial rate. Troops sleep under mosquito bars in screened buildings, and draining and the usual antimosquito measures have been carried out.

There is no sewerage system and dry-earth closets are in use at the post.

REGAN BARRACKS, ALBAY.

The venereal rate at this station has practically doubled during the past year, and, with the exception of that among troops of the China expedition, is the highest in the department. The matter was taken up from this office, and the post authorities attempted and partially succeeded in enlisting the assistance of the local civil authorities in an attempted solution of the problem. In November the surgeon sent to the department laboratory a considerable number of blood specimens for Wasserman test, and explained to this office that these were from prostitutes who had been arrested by the civil authorities. He reported as follows in connection therewith.

"All known prostitutes are being arrested and examined by the district health officer and the medical officers of the command. All found infected are tried and sentenced to jail. During their confinement they are treated until noninfective. These 24 specimens are from women now undergoing confinement, as it is desired to know the number suffering from syphilis in addition to having gonorrhea and chancroids. The civil authorities have set aside a designated area, and when these prostitutes are rendered noninfective will require them to live in that area and be subjected to weekly inspections. All prostitutes found outside of the area will be arrested and confined.

The surgeon further reports that all orders with reference to inspections and prophylaxis are carried out, and that all infected men are quarantined and treated until they cease to be infective.

In this, as at all other stations, clandestine prostitution is undoubtedly an important factor in the spread of this class of diseases.

The admission rate for malaria has been considerably reduced during the year.

WARWICK BARRACKS, CEBU.

The surgeon reports that dengue is endemic in Cebu, and that with the exception of minor acute gastrointestinal disturbances and respiratory disorders this disease has furnished the greater part of the admissions to sick report during the year.

He also states that there is practically no malaria in Cebu, and states that the cases are usually imported ones, about 30 of these having recently been brought to the post with the battalion of native troops transferred from Camp Overton. The usual antimalarial precautions are taken.

The venereal rate is small. Existing orders with reference to this class of diseases are carried out.

The cuartel and hospital are reported as being located "in the dirtiest part of the city," and officers are quartered in rented buildings in the town. "The quarters of married enlisted men living out of barracks are usually dirty and badly overcrowded. The poor housing is undoubtedly a prominent factor in the causation of the respiratory disorders with which these people are affected."

TIENTSIN, CHINA, AND SUBPOSTS OF CHINA EXPEDITION.

This command continues to lead the department in the admission rate on account of venereal diseases, and the figures are slightly larger than those of the preceding year. The surgeon reports that all War Department instructions with reference to these diseases have been carried out, supplemented by restriction to barracks of all cases undergoing treatment outside of hospital until they have ceased to be infective. He further states that the rates have been high, owing to local conditions. "On account of the delicate international relations existing here it is not believed that it will be practicable to institute any control over prostitution and prostitutes in the various concessions." This question has been taken up by this office at various times and it is believed that the military authorities are taking every possible step to control the evil.

The malarial rate is not large and shows little change from that of the preceding year. Owing to local conditions no extensive antimosquito work is practicable.

There have been no prevailing diseases except venereal.

The general sanitary condition is reported as "excellent, when due allowance is made for the lack of modern heating, plumbing, and lavatory conveniences."

CONCLUSION.

In closing, the department surgeon desires to say that general sanitary conditions throughout the department are satisfactory. There has been a decrease in the number of deaths, and had it not been for the extensive prevalence of dengue and the

slight increase in the venereal rate the same remark would have applied to the morbidity.

It is interesting to note that over half the deaths in the department among white troops during the year occurred as a result of traumatism or drowning, and it is a still more interesting fact that practically 25 per cent of the total death rate in the same class of soldiers is made up by cases of suicide.

The question of Medical Department personnel for this department was fully discussed in the department surgeon's report to the department commander, and was by him embodied in his annual report which has already reached the Surgeon General's Office. When the personnel now under orders for duty with this command shall have reported, it is believed that all ordinary conditions can be successfully met.

The commissioned personnel has been generally efficient, and the department surgeon has been particularly pleased with the manner in which a number of the junior, and consequently untried, officers of the Medical Corps have acquitted themselves when it became necessary, owing to a deficient personnel, to place them in positions of responsibility which would not ordinarily have been given to officers of their rank and experience. The manner in which they have taken hold of and carried on their work has furnished another evidence of the value of the training given at the Army Medical School.

The work of the Hospital Corps has been generally satisfactory. As in all bodies of men of considerable size, there are many who could have been replaced with great advantage. It is desired to mention particularly the good work of many of the older noncommissioned officers, as well as other old and faithful soldiers who have not been so fortunate as to win their chevrons.

It is regretted exceedingly that the law does not permit compensation commensurate with the value of their services.

HAWAII.

The mean enlisted strength of the troops serving in Hawaii during the year 1915 was 8,572, as compared with 7,971 during 1914. Of these, 1,863 were colored. A remarkable feature in connection with the rates for Hawaii in comparison with those for the United States is that while the total admission rate, noneffective, discharge, and death rates are lower, yet the individual rates for the preventable diseases are somewhat higher, especially that for venereal diseases. The average number of days' treatment for each case was 13.11, as compared with 13.34 for the United States.

ADMISSION RATES.

The admission rate during 1915 was 568.94 for total enlisted men per 1,000, as compared with 523.27 for 1914. The rate for disease alone was 440.85 per 1,000 and that for external causes 128.09; that for disease in 1914 was 401.96 and for external causes 121.31.

CONSTANTLY NONEFFECTIVE RATES.

The constantly noneffective rate was 20.44 per 1,000 for all causes in 1915, as compared with 18.75 for 1914. The rate for disease was 16.39 and that for external causes 4.04 per 1,000, as compared with 14.33 for disease and 4.42 for external causes in 1914.

DISCHARGES ON CERTIFICATES OF DISABILITY.

The rate for discharges for disability was, for all causes, 10.92 per 1,000, 9.79 being for disease and 1.13 for external causes. In 1914 the total rate was 9.02, that for disease being 7.89 and for external causes 1.13 per 1,000.

DEATHS.

The death rate (total) was 3.04 per 1,000, that for disease being 2.25 and for external causes 0.79, as compared with a total rate of 1.63, 1.13 for disease and 0.50 for external causes per 1,000 in 1914. In actual numbers 27 deaths occurred among the enlisted personnel, 20 being due to disease and 7 to external causes. Two of these deaths from external causes were due to suicide; 1 from suffocation, strangulation; 1 from drowning, accidental; 1 from traumatism by crushing; 1 from homicide; and 1 from other external violence.

TABLE NO. 43.—Influence of station on officers and enlisted men, Hawaiian Department, year 1915.

Hawaiian Department.	Mean strength.	Ratio per 1,000 of mean strength.										Average number of days lost.		
		Admissions to sick report.		Discharged on certificate of disability.		Deaths.		Total losses.		Noneffective from sickness.			From all causes.	
		From all causes.	Excluding injuries, venereal diseases, alcoholism, and vaccinia.	From all causes.	Excluding injuries, venereal diseases, alcoholism, and vaccinia.	From all causes.	Excluding injuries, venereal diseases, alcoholism, and vaccinia.	From all causes.	Excluding injuries, venereal diseases, alcoholism, and vaccinia.	Total.	In hospital.	Excluding injuries, venereal diseases, alcoholism, and vaccinia.	From all causes.	Excluding injuries, venereal diseases, alcoholism, and vaccinia.
Fort Kamehameha, Hawaii.....	444	668.92	360.36	18.65	18.65	6.76	.....	25.41	18.65	4.01	.....	.....	1.46	0.55
Schofield Barracks, Hawaii.....	5,349	588.15	350.16	10.24	8.30	2.43	1.50	12.66	9.80	13.91	12.71	6.53	5.08	2.66
Fort Shafter, Hawaii.....	1,944	531.38	316.87	15.91	11.66	.51	.51	16.42	12.17	.33	.....	.....	.12	.08
Fort Ruger, Hawaii.....	287	466.90	306.62	14.55	10.91	.....	.....	14.55	10.91	1.43	.....	.....	.52	.40
Fort De Russy, Hawaii.....	204	455.88	250.00	.....	.....	.....	.....	.....	.....	1.91	.....	.....	.70	.21
Fort Armstrong, Hawaii.....	112	446.43	232.14	18.35	18.35	.....	.....	18.35	18.35	.49	.....	.....	.18	.08
Total officers and enlisted men.....	8,876	568.50	333.82	10.92	8.78	3.26	1.84	14.18	10.62	20.24	19.07	10.59	7.39	4.11
Total enlisted men.....	8,572	568.94	329.80	10.92	8.78	3.04	1.91	13.96	10.60	20.44	19.65	10.87	7.46	4.11

INVALIDING TO THE UNITED STATES.

In 1915 there were 142 cases invalided home; in 1914 there were 141, and in 1913 there were 106.

The diseases or conditions causing the highest number of cases to be invalided home were:

Mental alienation, 33; tuberculosis, 28; syphilis, 9; organic disease of the heart, 8; chronic alcoholism and epilepsy, 5 each; and 5 cases of enuresis.

Enlisted men invalided home from Hawaii, year 1915.

Cause.	Number of cases.	Per cent- age of total cases.	Duty.	Discharge on certifi- cate of disabili- ty.	Died.	Other- wise dis- posed of.	Remain- ing at end of year.
Mental alienation (paralysis of the insane, 4; dementia precox, 17; defective mental development, 5; other varieties, 7)	33	23.24	.....	25	1	.....	7
Tuberculosis: pulmonary, 27; Potts' disease, 1	28	19.72	3	3	1	1	20
Syphilis	9	6.34	3	3	.....	.....	3
Organic disease of the heart	8	5.63	1	7	.....	.....	.....
Chronic alcoholism	5	3.52	.....	3	.....	.....	2
Epilepsy	5	3.52	.....	5	.....	.....	.....
Enuresis	5	3.52	.....	2	.....	3	.....
Chronic articular rheumatism	4	2.82	1	.....	.....	2	1
Secondary results of injury	4	2.82	1	2	.....	.....	1
Gonorrhea	3	2.11	2	1	.....	.....	.....
Bunion	3	2.11	.....	3	.....	.....	.....
Fracture	3	2.11	.....	2	.....	.....	1
Exophthalmic goitre	2	1.41	1	.....	.....	.....	1
Paraplegia	2	1.41	.....	1	.....	.....	1
Hysteria	2	1.41	.....	1	.....	.....	1
Goitre	2	1.41	1	1	.....	.....	.....
Chronic bronchitis	2	1.41	.....	2	.....	.....	.....
Asthma	2	1.41	.....	1	.....	.....	1
Dysentery	1	.70	.....	.....	.....	.....	1
Cerebrospinal meningitis, epidemic	1	.70	.....	1	.....	.....	.....
Glaucoma	1	.70	1	.....	.....	.....	.....
Otitis media	1	.70	.....	1	.....	.....	.....
Rhinitis hypertrophic	1	.70	.....	1	.....	.....	.....
Gingivitis	1	.70	1	.....	.....	.....	.....
Intestinal indigestion	1	.70	.....	1	.....	.....	.....
Peritoneal adhesions	1	.70	.....	1	.....	.....	.....
Chronic nephritis	1	.70	1	.....	.....	.....	.....
Eczema	1	.70	1	.....	.....	.....	.....
Painful scar	1	.70	1	.....	.....	.....	.....
Necrosis	1	.70	.....	.....	.....	.....	1
Periostitis	1	.70	1	.....	.....	.....	.....
Arthritis	1	.70	.....	.....	.....	.....	1
Synovitis	1	.70	1	.....	.....	.....	.....
Flat foot	1	.70	.....	.....	.....	.....	1
Incised wound	1	.70	.....	1	.....	.....	.....
Lacerated wound	1	.70	.....	.....	.....	.....	1
Punctured wound	1	.70	.....	1	.....	.....	.....
Dislocation	1	.70	.....	1	.....	.....	.....
Total cases	142	.....	20	70	2	6	44
Percentage of total cases .....	.....	100.00	14.08	49.30	1.41	4.23	33.90

The following tabulation for enlisted men furnishes a comparison of general rates for Hawaii with the United States:

	Admission rate.		Noneffective rate.		Death rate.		Discharge rate.	
	1915	1914	1915	1914	1915	1914	1915	1914
Hawaii	568.94	523.27	20.44	18.75	3.04	1.63	10.92	9.02
United States	704.01	629.84	25.74	23.37	5.42	4.82	13.60	14.82

Table Nos. 43 and 74 give figures for all troops serving in Hawaii. The diseases causing the highest admission and noneffective rates among officers and enlisted men are shown in the following tabulations:

Admission rates for some of the principal diseases in the Hawaiian Department, American troops, officers and enlisted men.

	Total officers and enlisted men.		Total enlisted men.	
	1915	1914	1915	1914
Venereal diseases.....	95.76	65.07	99.04	67.37
Bronchitis.....	29.63	32.65	28.93	32.87
Diarrhea and enteritis.....	26.36	26.85	24.85	26.60
Tonsillitis.....	19.83	15.24	19.95	15.18
Influenza.....	19.27	28.42	18.31	26.72
Furuncle.....	14.08	22.62	14.35	22.96
Constipation.....	13.52	17.42	13.77	17.69
Alcoholism.....	11.27	11.61	11.56	12.04
Appendicitis.....	10.59	6.89	9.92	6.90
Rheumatism, muscular.....	8.90	11.01	8.52	10.41
Gastritis, acute and chronic.....	7.89	5.92	7.93	5.68
Rhinitis, acute.....	7.44	1.94	7.47	1.51
Cellulitis.....	6.76	6.05	7.00	5.90
Mental alienation.....	4.39	3.63	4.55	3.64
Tuberculosis.....	3.49	3.02	3.62	3.01
Rheumatism, articular, acute and chronic.....	3.27	2.66	3.38	2.68
Lymphadenitis, nonvenereal.....	2.48	2.54	2.45	2.63
Enuresis.....	1.92	.97	1.98	1.00
Malarial fevers.....	1.69	1.33	1.75	1.26
Flat foot.....	.79	.48	.82	.50

Noneffective rates for some of the principal diseases in the Hawaiian Department, American troops, officers and enlisted men.

	Total officers and enlisted men.		Total enlisted men.	
	1915	1914	1915	1914
Venereal diseases.....	4.78	3.41	4.95	3.53
Appendicitis.....	.71	.54	.67	.58
Bronchitis.....	.67	.69	.68	.70
Influenza.....	.38	.55	.37	.56
Diarrhea and enteritis.....	.38	.37	.37	.37
Tonsillitis, acute.....	.37	.26	.38	.26
Mental alienation.....	.36	.34	.35	.33
Tuberculosis.....	.27	.23	.28	.23
Enuresis.....	.23	.03	.24	.08
Rheumatism, articular, acute and chronic.....	.22	.21	.23	.21
Furuncle.....	.22	.36	.23	.26
Rheumatism, muscular.....	.18	.27	.18	.27
Alcoholism.....	.17	.14	.18	.14
Lymphadenitis, nonvenereal.....	.14	.09	.15	.16
Cellulitis.....	.13	.20	.13	.20
Constipation.....	.13	.19	.14	.19
Gastritis, acute and chronic.....	.13	.15	.13	.14
Rhinitis, acute.....	.07	.02	.07	.02
Malarial fevers.....	.06	.03	.06	.08
Flat foot.....	.02	.04	.02	.04

SPECIAL DISEASES.

TYPHOID FEVER.

An epidemic of typhoid fever occurred at Schofield Barracks during the latter part of the year 1915, the last case of which occurred in February, 1916, to determine the incidence of which the surgeon at that post appointed a board of medical officers to investigate it carefully. The work was carried out under three heads, viz, first, a careful tabulation of the cases according to the form desired by this office; second, a survey of the food and water supplies; and, third, an attempt to establish the presence of a carrier.

The board, composed of Maj. H. D. Bloombergh and Lieuts. G. R. Callender, R. W. Bliss, and R. H. Duenner, ably assisted by Capt. F. H. Foucar, of the Department Laboratory, Hawaiian Department, investigated the following cases, which occurred on the dates specified:

No.	Date.	Name.	Sex.	Age.	Nationality, etc.	Place.
1	1915. Oct. 15	A. H. ¹	Female.	8	Japanese.....	Lieut. Sears's quarters, First Infantry.
2	...do.....	J. F.....	Male....	8	American.....	Son of Capt. Fair, Quartermaster Corps.
3	Oct. 25	F. ¹.....	...do....	23	Soldier.....	Company F, First Infantry.
4	Oct. 27	O. ².....	...do....	29	Japanese.....	Capt. Knight's quarters, First Infantry.
5	Oct. 28	I. Y. ¹	Female.	26	...do.....	Maj. Sorley's quarters, First Infantry.
6	...do....	S.....	Male....	24	Soldier.....	Company I, First Infantry.
7	Nov. 2	D.....	...do....	19	...do.....	Company E, First Infantry.
8	Nov. 15	L.....	...do....	24	...do.....	Troop K, Fourth Cavalry, near First Infantry.
9	Nov. 18	B.....	...do....	23	White civilian..	Civilian employee, Quartermaster Corps, near First Infantry.
10	Dec. 24	U. ¹	Female.	25	Japanese.....	Quartermaster camp, 7 miles from camp.
11	1916. Jan. 14	Y. F. ¹	Male....	25	...do.....	Lieut. Kleffer's quarters, Fourth Cavalry.
12	Jan. 29	C.....	...do....	30	Soldier.....	Company I, First Infantry.
13	Feb. 20	T. S. ¹	Female.	25	Japanese.....	First Infantry tailor shop.

¹ Transferred to other hospitals.

² Died in department hospitals.

At Schofield Barracks during the two years prior to October, 1915, there have been no cases of typhoid fever and but one case of paratyphoid fever in July, 1915.

Schofield Barracks in its entirety extends, roughly speaking, over 3 square miles of territory. Locally it is known to consist of two parts, the upper, old, or cantonment section is called Schofield Barracks, while the lower, new, or concrete portion is called Castner, after the railroad station of that name. All of the cases of typhoid, with one exception, occurred in the Castner section, the excepted case (U.) arising at the quartermaster construction camp connected with the building of the new water-supply system, and distant from the post about 7 miles. The entire command was on maneuvers near Fort Shafter from October 13 to October 23, when the enlisted men visited Honolulu, where typhoid fever is endemic. Notwith-

standing this fact, it is believed from a study of the clinical records in cases 3, 6, and 7 that these soldiers most likely were infected in the post and not at Honolulu.

The water supply of Schofield Barracks proper is obtained from tunnels driven into the Waianae Range of mountains. The tunnels bring the water into reservoirs located about $1\frac{1}{2}$ miles from the post, from whence it is pumped into tanks, which then supply the post by gravity. No cases of typhoid fever have occurred in the Schofield section.

The water supply of the Castner section at present comes from the South Fork of the Kaukonahua River, the water being conducted to the post by means of an extensive system of partly concreted tunnels, which pick up the stream high up in the Koolau Range and carry it through hillsides or in the open for a distance of 3 miles to a reservoir, whence a pipe line takes it to the post, a farther distance of 6 miles. While these typhoid cases were occurring this system of water supply had not been put into effect. The water supplied to the Castner and only occasionally to the Twenty-fifth Infantry section of Schofield came from the reservoir. This reservoir is formed by a dirt embankment across a gulch and is fed by surface water and small springs. The flow from this reservoir was augmented at times by water pumped directly from the South Fork by a pumping station $3\frac{1}{2}$ miles from the post.

For the construction of the tunnel system a camp for employees was established in the vicinity of the line of construction. On an inspection trip made January 22, 1916, inquiry was made of various white and Japanese employees with the idea of determining the possibilities of a water infection of the Castner section. Water was pumped from time to time between September 14 and December 26, 1915, from the open South Fork River into the main supply line to the post and twice in January, 1916, for three hours at a time. The course of the river is through uninhabited regions, and the water is as safe as such waters can be.

It seems further that about December 22, 1915, a Japanese laborer left the camp sick of some unknown condition and, a few days later, a sick Japanese woman went to Honolulu from the camp. About this time the department of health in Honolulu gave the information that a Japanese woman formerly employed in Schofield Barracks was sick at the Japanese hospital with typhoid fever. This seems to refer to one and the same woman and the name of the sick woman was given as U. Unfortunately there is an irreconcilable conflict of dates as to the occurrence of this illness. During the construction of tunnels, the camp for Japanese workmen referred to was maintained about 2 miles above the reservoir. The sanitary arrangements of the camp were very good. It was learned, however, that while these workmen were supposed to use buckets for their excreta while working in the tunnels, in spite of this fact the tunnels became soiled; furthermore, that about December 26, 1915, the tunnels were cleaned out and that this filth was swept into the reservoir.

It is an easy assumption to make (but one untenable on account of the lack of exact information) that U. acquired her typhoid fever at the quartermaster camp along the tunnels, that she went out of the camp by way of the tunnels, that she scattered the organisms along the route, and that this one case gave rise to cases 11, 12, and 13.

But assuming for the sake of argument that this woman might have been so responsible, such fact would throw no light on the earlier cases unless she had acquired her disease from some earlier carrier in the camp.

On February 13, 1916, the following report of water examination was made by Capt. Foucar, in charge of the department laboratory:

Fourth Cavalry supply (Schofield Barracks): No gas formation in three lactose fermentation tubes; colony count per cubic centimeter 0.25 (1 colony in 4 cubic centimeters).

First Infantry supply (Castner): Gas production, No. 1 tube, 30 per cent; No. 2 tube, 30 per cent; No. 3 tube, 40 per cent; still active gas production at end of 24 hours in all three tubes; colony count per cubic centimeter 0.40.

Vegetables and fruits are supplied to the post very generally by Japanese, Chinese, and Korean hucksters. There are about 18 of these men who have their own wagons and peddle their supplies daily, with the exception of one or two. These men get all of their vegetables and fruits from gardens at Waialua, 8 miles from the post. These gardens are kept by six Chinese families, and are irrigated by running water from the Koolau range in a series of ditches. The gardeners live in wooden shacks by the side of the gardens and have dry earth closets in the rear of these gardens. They use no human excreta for fertilizing purposes and the gardens are especially well kept. The gardeners are in all instances Chinese who deny sickness. Two of the hucksters have their own gardens at Wahiawa. They also have dry earth closets and do not use human excreta for fertilizer, and show no evidence of ill health. There are two vegetable markets in the post, one run by an Hawaiian woman, who gets her vegetables from the gardens, and a Chinese who gets his vegetables from Wahiawa and Waialua. At times these markets and the post exchange and the different organizations purchase vegetables and other supplies from the markets in Honolulu.

Milk and cream are supplied to the post from two sources. All of the officers are supplied from the T. ranch, which is situated 3 miles from Wahiawa and 6 miles from the post. The dairy is conducted in a fairly clean manner. Mr. T. has a herd of about 70 tuberculin-tested cows. These animals are fed, for the most part, on imported alfalfa, the grazing facilities of this country being very poor. The cows are milked twice daily in sheds with cement floors by four Japanese. There is running water in the milk shed and the milkers are clean and fairly careful. The milk is milked into small-mouthed tin pails and is taken to another building where it is cooled. The cooling system is crude, but answers the needs fairly well. The milk is then collected in glass bottles, which are kept clean by soap and water, and immediately delivered by means of a motor truck to the post. The cows are milked at 4 a. m. and 1.30 p. m., and two deliveries made daily. All of the employees of this dairy have been examined (by Widals), with negative results. The different exchanges and restaurants connected with them get their milk from the Honolulu Dairymen's Association, delivered to the post by motor truck.

For the sake of completeness the following table shows the result of examinations, made by the department laboratory, of the milk from the post dairy during 1915.

Date.	Butter fat.	Specific gravity.	Bac-teriology count.
1915.	Per cent.		
June 3.....	3.2	1.029	10,000
June 7.....	3.0	1.029	1,200
June 17.....	3.2	1.030	16,000
July 7.....	3.4	1.030	1,250,000
July 22.....	3.6	1.030	9,000,000
Aug. 7.....	2.7	1.030	2,000,000
Aug. 19.....	3.2	1.030	20,000
Oct. 15.....	4.4	1.031	4,000,000

A bacteriological count made February 11, 1916, showed 246,000 bacteria per cubic centimeter.

The milk gave no reaction to tests for formaldehyde, salicylic, benzoic, and boric acids.

The following table gives the most essential features of the cases among the enlisted men:

No.	Name.	Immunization completed.
3	F. ¹	Jan. 22, 1914
6	S.....	Feb. 10, 1914
7	D.....	Feb. 23, 1915
8	L.....	Apr. 1, 1913
12	C.....	Mar. 16, 1915 ²

¹ Transferred to department hospital; no record. ² 2 doses only.

These cases were clinically typhoid fever. Case No. 8 was mild. Cases Nos. 6 and 12 were moderately severe. Case No. 7 was extremely severe and characterized by delirium. All recovered. None had hemorrhage. Case No. 6 had two relapses, and case No. 12 had phlebitis, left leg, and cystitis.

In the attempt to isolate a carrier, it was deemed advisable to make routine Widal's of various servants and employees. All the servants of the officers of the First Infantry, numbering 70, mostly Japanese, were examined, and the reactions were negative except in three cases previously vaccinated. On the supposition that a carrier might be found in the restaurants at Castner, Widal's were made on specimens of blood from the seven Chinese employees of the First Infantry restaurant and the four Chinese employees of the Fourth Cavalry restaurant. The reactions were negative.

On February 20, a case having been found in the First Infantry tailor shop in the person of a Japanese, Widal's were made on specimens of blood taken from the nine employees of this establishment. The reactions were negative.

In addition seven Widal's were made on Japanese found at the quartermaster camp connected with the building of the tunnels for the water supply and also on the five employees of the post dairy. The reactions were negative.

Systematic attempts were made to isolate carriers by stool and urine examinations. Eight examinations were made for typhoid or paratyphoid in this manner of the employees of the First Infantry tailor shop; 2 cooks of K Troop, Fourth Cavalry; 3 cooks from F Company; 3 cooks from I Company; and 2 cooks from E Company,

First Infantry. Later stools or urine were examined of 8 hucksters, Chinese or Japanese, and of 13 employees of restaurants, the latter comprising all the enlisted men on duty in the restaurants in whose cases the Widal reaction would be useless on account of typhoid immunization. Additional examinations were made of suspect carriers prior to the establishment of this board, after the occurrence of the disease in B., a civilian employee. Careful stool examinations were made of all cooks and mess attendants at the prison stockade mess, 8 in number, with negative results.

In summing up the findings of the board, the following general review is given:

The first two cases occurred on October 15, 1915, in two children, both 8 years of age and attending the district school, which is located in the Schofield Barracks section. No other cases occurred in this school. The two children went back and forth from school in different wagons.

The board has been unable to trace any connection between the two cases which occurred on October 15 and the four succeeding cases which occurred between October 25 and 28, 1915, but it believes that the same cause was common to the first six cases.

Following the discovery of typhoid fever in the son of Capt. F., stool examinations were made of Capt. F., who had typhoid fever in 1898, and also of O., a house servant. These were negative for typhoid bacilli and their respective Widal's were also negative.

After close scrutiny of the foregoing data, the board can not decide even the probable origin of the disease.

It is recognized that a single examination does not decide whether an individual is or is not a carrier.

As far as examinations are concerned, the results indicate that there is no carrier among the dairy employees, the hucksters, and the post exchange employees.

The evidence throws suspicion on the water supply, but the epidemic was not of the explosive type characteristic of water-borne disease.

Even if the disease disappears coincidentally with the installation of a new and improved water-supply system, at the same time some carrier connected with the food-supply system may have left the post or been transferred to some other duty.

While the report is submitted with no conclusions reached, the board believes that considerable valuable material has been collected and made available, in case further cases should develop.

The surgeon, Schofield Barracks, in transmitting the report of the board, remarks:

Though positive proof is not available, the surgeon is strongly of the opinion that a Japanese carrier was responsible for all the cases cited in this report.

PARATYPHOID FEVER.

One case of this disease occurred.

MALARIA.

Fifteen cases were reported during the year.

SMALLPOX AND VARIOLOID.

None occurred.

MEASLES.

Twenty-two cases of measles occurred with two deaths.

INFLUENZA.

This disease caused the highest number of admissions, venereal diseases excepted, 171 cases being reported, with an admission rate of 19.27 per 1,000.

DYSENTERY.

Owing to the number of cases of amœbic dysentery occurring during the year, 20 in number, a board was appointed consisting of three medical officers to investigate and report upon the cause and submit recommendations for the prevention of this disease in the future. The board met at Fort Ruger, Hawaii, April 25, 1916, and their conclusions and recommendations may be summed up as follows:

That amœbic, or more properly entamœbic, dysentery is not especially prevalent in Oahu, and while sporadic cases do originate in the island, it can not properly be considered as endemic.

That its apparent incidence is understood to result principally from importation of chronic cases, carriers, and persons in long incubation period (average 64.8 days).

That the "carrier" theory is the method in which entamœbic dysentery is disseminated, but that its transmission is still undetermined.

That infection usually occurs through the ingestion of cyst-bearing food and drink either directly or contaminated through handling by a carrier, or indirectly contaminated by rodent, fly, or other insect transferences of cysts from infected stools to food, or by the use of night soil or polluted water in irrigating and washing garden produce.

That the life of the cysts of entamœbic histolytica in water or on vegetables before losing their infective power is not known at this time.

That the usual bacteriological and chemical examination of water and milk would be useless in attempting to determine the presence or absence of these cysts, and that after an examination nothing more conclusive than an opinion as to whether the water was polluted with sewage could be given.

That the local sanitary defects noted at the different posts visited is not directly related to the occurrence of the cases considered, but that the more scrupulous the individual and organization hygiene the less frequent will be the cases of entamœbic infection.

That the prominent part played by carriers should be constantly borne in mind in determining the details of administration pertaining to food and its preparation.

That the immediate proximity of latrines to the kitchens as seen in the new barracks at Fort Kamehameha is considered dangerous and likely to rapidly disseminate any intestinal disease that might gain a foothold in the organization even if contrary to the present condition, both kitchens and latrines were properly screened.

The board recommended that—

All cooks in organizations from which patients showing *entamoeba histolytica* in their stools are received have their stools examined once a month for three months thereafter.

All enlisted men, and especially noncommissioned officers, be instructed regularly in hygiene of entamoebic dysentery especially with regard to the danger from allowing men with histories of abdominal cramps, diarrheas, etc., who might be carriers, as cooks and kitchen police.

All medical officers be instructed to prepare complete histories of all cases diagnosed as diarrhea, intestinal fermentation, colitis, enteritis, gastritis, ptomaine poisoning, gastroenteritis following the form outlined above and that the stools of such cases be examined repeatedly for *entamoeba histolytica* as invariably as the Wassermann reaction is now being requested in cases of venereal sore.

Increasing efforts be made everywhere in garrison and in the field to make latrines, kitchens, and dining rooms flyless and flyproof. The importance of this can not, in the opinion of the board, be over-emphasized and it believes that apparent compliance with but real indifference to the thorough execution of these principles is a sanitary menace.

Experimental work be instituted to determine whether the rat is a carrier of *entamoeba histolytica*, and how long the cysts of that parasite retain their infective power after leaving their host.

BRONCHITIS.

There were 263 cases of bronchitis with an admission rate of 29.63.

TUBERCULOSIS.

There were 31 cases, 28 of which were pulmonary tuberculosis.

VENEREAL DISEASES.

There was a considerable increase in the venereal rate for 1915 over 1914, 850 cases in all occurring, with an admission rate of 95.76. Of these cases 237 were syphilis, 96 chancroid, and 517 gonorrhea.

ALCOHOLISM AND ITS RESULTS.

There were 100 cases admitted for this cause, with an admission rate of 11.27, which was slightly lower than for 1914.

DIARRHEA AND ENTERITIS.

Two hundred and thirty-four admissions are chargeable to this cause, producing an admission rate of 26.36.

HEMORRHOIDS.

There were 55 cases admitted during the year.

MENTAL ALIENATION.

Thirty-nine cases of mental alienation were reported, resulting in an admission rate of 4.39, an increase over last year.

SANITATION.

The following sanitary defects are reported by the department surgeon:

FORT ARMSTRONG.

Septic tank too small (January report). War Department declines to act, as it is the policy to remove command to Fort Kamehameha and retain only a caretaker (fifth indorsement, Mar. 13).

FORT DE RUSSY.

The old and temporary buildings are to be replaced by new construction, for which bids have been invited. Estimates have been made to properly fly-proof kitchen of Tenth Company, Coast Artillery Corps (December report).

FORT KAMEHAMEHA.

Authority has been given to correct faulty location of windows in permanent non-commissioned officers' quarters if source of discomfort (special sanitary report, Mar. 12).

From special sanitary report of November, it would appear that the plans of new permanent barracks overlooked essentials of sanitation and that changes in original plan further increased difficulties. This has been made the subject of investigation and report of sanitary inspector and is now receiving the special attention of the department commander. It is not known by whom the original plans were drawn and approved, but one can not conceive them obtaining the approval of a sanitarian.

The filling of the near-by swamps is urged by the surgeon as a sanitary matter in December report, and as the labor and expense involved is great, will require the action of the War Department.

FORT SHAFTER.

The recommendation of the surgeon (March report) to hold recruits on mainland until all likelihood of introduction of infectious diseases is passed, is impracticable and inadvisable.

In August report the following defects are noted: No kitchen and dining room for band of Second Infantry. Room so used inadequate in size and so situated that dust from grounds of quartermaster stables blows into door. This is awaiting action of War Department. Drainage ditch through post imperfect and should be cemented to assure free flow of water and prevent breeding of mosquitoes. Cement is now available and rock crusher of post has been repaired, so that work can be done with post labor (December report). Imperfect sewage plant for the present and proposed future garrison. The present plant was intended for one battalion at peace strength. Present garrison: One regiment of Infantry, one company of Engineers, one company of Signal Corps, all at war strength. Future garrison probably will be one or two additional regiments. Estimates (\$140,000) for a proper main sewage system are being prepared (December special report). This should be installed prior to permanent construction. September report shows the need for a proper dispensary building. The need is acknowledged by the department commander, but not approved for a temporary structure, as estimates for a permanent post have been submitted for action of Congress (November report). Inadequate water-closet facilities in cantonment barracks. This has received as yet no action.

SCHOFIELD BARRACKS.

The necessity of sanitary provisions in advance of the arrival of troops is shown by the many defects noted in the reports of Schofield Barracks.

The shortage of water supply has been one of constant complaint. With the cement lining of the ditch from Koolau Range to reservoir, it is believed this will end. It is thought that this cement lining of ditch would have been provided for in the beginning had a hydraulic engineer, familiar with Hawaiian conditions, been in charge. The

disposal of sewage offers an opportunity for similar comment regarding the employment of a competent sanitary engineer in planning a comprehensive system provided fore knowledge is available of what the garrison is to be. Defects in this respect are noted in sanitary report of September, and it is believed will continue until remedies proposed are carried out. A proper plan of post would not have constructed noncommissioned officers' quarters in the proximity of septic tanks when so much other land is available.

The following recommendations of surgeon on December report await action of higher authority:

"(a) Barracks to be built to replace casual (quarantine) camp."

With a post the size of Schofield Barracks infectious diseases are almost sure to be brought with each lot of recruits from the mainland. Should the enlistment period be decreased, such arrivals will be more numerous and more frequent than in the past, and the need of proper quarantine greater.

"(b) That a guardhouse be erected in place of the stockade camp for general prisoners."

The recent severe storms have demonstrated the need for this.

"(c) That permanent roads be built to replace the quagmires now used as roads."

This only indirectly affects sanitation.

"(d) That the makeshift and partial sewer system be extended to all parts of the post and completely modernized."

"(e) That the septic tanks of the sewage disposal plant be covered to prevent fly breeding."

These last two are covered by remarks above as regards a competent sanitary engineer furnishing a proper plan and strict adherence thereto.

DEPARTMENT HOSPITAL.

Quarters for medical officers and noncommissioned officers of Hospital Corps are required, as stated in January report. The War Department has been asked for the money to buy adjoining land and Congressional action is sought. Until that time public buildings will be inadequate for command and the officers be obliged to live from 3 to 10 miles from hospital.

SANITARY PERSONNEL.

With an increase of 13 medical officers, the complaint of last annual report as to scarcity for peace conditions no longer holds. The Hospital Corps is deficient, especially in competent noncommissioned officers, of whom there are but 31. These, with the 185 privates first class and privates, including lance corporals and acting cooks, give but 2½ per cent of the command, a number barely sufficient to do the ordinary routine work of hospitals and dispensaries and not having time to devote to the necessary field instruction at Schofield Barracks and hospital training at department hospital. Should an active campaign become necessary, this shortage would most seriously affect the sanitary conditions and consequent morale of the troops.

The needs of the Medical Department for war in Hawaii were set forth in a report to the department commander under date of October 1, 1915.

INSTRUCTION OF PERSONNEL.

With the arrival (Jan. 15, 1916) of 25 recruits, Schofield Barracks will be enabled to give some needed field instruction. In January, 1915, a class of 10 men was formed at department hospital from selected privates of the various stations for a course in nursing. These men were returned to their stations after four months' training and were given certificates of having completed such special course of Army nursing. Report of school inclosed. In November another class of 10 was organized, a greater number not being available. It is intended to continue this training for six months. The organization of the United States Service Medical Society of Hawaii, of which all commissioned officers of the Medical Department (excepting three) are members, for the discussion of medico-military matters, it is believed will be of benefit to the Army service as well as individuals. Paragraph 45, General Orders, No. 2, Headquarters, Hawaiian Department, July 1, 1915, has resulted in a better study, especially by junior medical officers, from a military sanitary point of the conditions liable to be met in war.

Until ambulance companies are given this department, proper field training and consequent sanitary preparations can not be gained.

HOSPITALS AND DISPENSARIES.

The construction of a nurses' quarters and clinic building have given much-needed additions to the department hospital. The alterations of one of the buildings into prison and detention wards, with hydrotherapeutic section, is under way, and will permit better handling of cases for which instituted. A laundry should be provided. Quarters for commissioned and married noncommissioned officers is an urgent need. It is not known what progress has been made in obtaining the necessary land adjoining the hospital upon which these buildings can be erected, but the need therefor is great, and the expense to the Government in the form of commutations for quarters makes a considerable item. As it is, commissioned and noncommissioned officers are obliged to reside at distances of 3 to 8 miles from their work, are under expense in going to and fro, and are not as immediately available as though they lived nearer.

The estimates for these 14 sets of officers' and 6 sets of noncommissioned officers' quarters call for approximately \$75,000.

A 240-bed hospital should be one of the permanent structures at Schofield Barracks. Estimates have already been submitted for a plan which can be readily expanded. It is understood that the Surgeon General has asked for \$150,000 for this purpose.

The construction of the Iwilei prophylactic station has already been mentioned. As it was occupied only subsequent to June 22, its workings can not be told.

Additional room for dental surgeons and a larger detachment of Medical Department is required at the Fort Kamehameha dispensary. Until such space is available, this post can not be made a base dental station, and the people entitled to treatment must, in many instances, go either to department hospital or department headquarters for proper treatment.

A proper dispensary is an urgent need at Fort Shafter. The present shack offers but poor facilities for doing the great amount of regular dispensary work of a station having a strength approximating 2,000 with many families of officers and enlisted men in addition. Should additional regiments be stationed at this garrison, it is recommended that additional dispensaries be provided.

The establishment of a medical supply depot by authority of Secretary of War (Dec. 9, 1915), and actual organization in March, 1916, has added much to the preparedness of the medical department in case of emergencies. Suitable storehouses and offices are needed. The reserve supplies, valued at approximately \$105,000, have not been entirely overhauled since their receipt in these islands in 1910, and this work is hampered by reason of lack of room, and, in the past, shortage of help. In 1915 the leather equipments of the ordnance department for sanitary field units were overhauled, and it was estimated that they had deteriorated many per cent (20-40). The condition of canvas and cloth material is not known. Stored as it has been in the past, and still is, in all kinds of structures, and wherever space is available, has not been in the interest of economy. Undoubtedly much of the medical supplies are deteriorated. As the advance copies of Manual Medical Department, which make changes in supply tables, has just been received, these units will be overhauled at earliest practical opportunity and be brought up to date. But proper storage facilities must be provided. To have an efficient department of any kind requires proper personnel, with sufficient time to train, needed matériel stored and assembled where it can be safeguarded and issued, and, in the case of the Medical Department, proper hospital facilities. In all these respects there is much lacking, and efforts to secure the same have met with only partial success.

PANAMA CANAL ZONE.

The mean strength of all troops, including officers, serving in the Panama Canal Zone during the year was 5,903, as compared with 2,076 for 1914.

ADMISSION RATES.

The admission rate for all causes was 859.22, that for disease being 709.81 and that for external causes 149.41, as compared with 938.35, 818.88, and 119.46, respectively, for the year 1914.

The diseases causing the highest admission rates were: Venereal diseases, 132.48; malarial fevers, 85.55; influenza, 46.76; bronchitis, 29.65; tonsillitis, 29.14; and furuncle, 26.09.

It is considered worthy of comment to call attention to the remarkable reduction in the malarial fever rate from 205.20 in 1914 to that given above, which would indicate that measures looking to the protection against and destruction of mosquitoes are effective, if properly carried out.

Admission rates for some of the principal diseases for Panama Canal Zone, American troops, officers and enlisted men.

	Officers and enlisted men.		Enlisted men.	
	1915	1914	1915	1914
Venereal diseases.....	132.48	131.50	136.51	135.82
Malarial fevers.....	85.55	205.20	87.57	208.96
Influenza.....	46.76	31.31	47.37	31.34
Bronchitis.....	29.65	18.30	29.89	18.91
Tonsillitis.....	29.14	46.72	29.36	47.76
Furuncle.....	26.09	12.52	26.57	12.94
Diarrhea and enteritis.....	16.60	15.41	16.78	15.92
Appendicitis.....	15.92	21.68	16.08	21.89
Alcoholism (all).....	15.25	9.63	15.73	9.95
Lymphadenitis, nonvenereal.....	13.21	21.68	13.63	22.38
Rheumatism, muscular.....	9.32	8.19	8.31	8.46
Hemorrhoids.....	8.13	13.97	8.22	14.43
Rhinitis, acute.....	6.78	7.71	6.29	7.46
Tuberculosis (all).....	5.93	2.41	6.12	2.49
Flat foot.....	5.25	6.26	5.42	6.47
Rheumatism, articular (all).....	4.41	4.34	4.54	4.48
Pleurisy.....	3.22	7.23	2.97	7.46
Dysentery.....	1.02	.....	1.05	.....

CONSTANTLY NONEFFECTIVE RATE.

The noneffective rate was 25.63 for all causes, as compared with 36.45 for 1914; that for disease being 21.66 per 1,000, and that for external causes, 3.97. The diseases causing the highest noneffective rates were: Venereal diseases, 5.05 per 1,000; malarial fevers, 2.27; appendicitis, 1.06; and lymphadenitis (nonvenereal), 0.95.

PORTO RICO.

The troops are all recruited from and partly officered by native Porto Ricans. The regiment is commanded by a United States Army officer. The sanitary work in connection with this organization is in charge of a medical officer from the regular corps and a medical officer from the Medical Reserve Corps. The two garrisoned posts have a mean strength of 719 officers and men.

ADMISSION RATES.

The admission rate for all causes in 1915 was 552.16, as compared with 615.28 in 1914; for disease, 496.52 as compared with 534.65, and for external causes, 55.63 as against 80.62 in 1914.

An improvement in health conditions among the troops is evidenced by the reduction in the rates for 1915 over the year 1914. It is regrettable that the rate for venereal diseases is higher this year, as compared with 1914 which showed an appreciable reduction over 1913, these diseases causing the highest admission as well as the highest noneffective rate, dengue fever taking second place, with rates of 84.84 and 76.50 per 1,000, respectively.

NONEFFECTIVE RATES.

The noneffective rate for all causes is also slightly higher than for the preceding year, being 22.36 for 1915, as compared with 21.64 for 1914. The rate for disease was 20.57, as compared with 18.93 for 1914.

It will be noted that there was a marked decrease in the malarial rate.

Some of the principal diseases, with the admission and noneffective rates as compared with the preceding year, are shown in the following tabulation:

Admission and noneffective rates per 1,000 of mean strength for the most prevalent diseases among officers and enlisted men in Porto Rico.

	Admission rates.		Noneffective rates.	
	1915	1914	1915	1914
Venereal diseases.....	84.84	66.48	4.57	3.84
Chancroid and results.....	26.43	16.97	1.68	1.19
Gonorrhea and results.....	33.38	18.39	1.56	.75
Syphilis and results.....	24.90	31.12	1.33	1.89
Dengue.....	76.50	8.49	3.94	.11
Acute abscess and cellulitis.....	44.51	50.92	1.16	.90
Diseases of the lymphatic system.....	31.99	19.80	1.06	.71
Rhinitis, acute.....	26.43	115.98	.40	1.28
Furuncle.....	23.64	15.56	.45	.38
Dysentery.....	22.75	7.07	.56	.21
Diarrhea and enteritis.....	19.47	36.78	.37	.75
Rheumatism, muscular.....	11.13	9.90	.19	.28
Malarial fevers.....	8.34	12.73	.34	.23
Febricula and undetermined fevers.....	6.95	1.41	.12	.02
Rheumatism, articular (all).....	5.56	11.32	.42	.22
Ankylostomiasis.....	5.56	5.66	.26	.38
Tonsillitis.....	2.78	12.73	.05	.16
Smallpox.....	1.39	2.83	.22	.17
Tuberculosis.....	1.39	1.41	.18	.43

DISCHARGES ON CERTIFICATE OF DISABILITY.

The rate for discharge for disability was 7.34 per 1,000 for disease for 1915, as compared with 8.97 for diseases in 1914.

DEATHS.

The death rate was 4.17 per 1,000, there being three deaths during the year, two due to disease and one to injury. In 1914 there were also three deaths, all due to disease.

SPECIAL DISEASES.

YELLOW FEVER.

The surgeon at San Juan, P. R., in September, 1915, called attention to the existence of several cases of febrile disease coming under his observation and resembling in certain features, yellow fever. He expressed the opinion that the so-called "seven-day fever," "dengue," and "black-water fever" as they exist in Porto Rico, were possibly all closely related to yellow fever, and accordingly so tentatively diagnosed his cases.

On further study the diagnosis of yellow fever in these cases was not confirmed by either the local health authorities or by the Surgeon General of the Army, who in person investigated the matter very thoroughly upon the request of the Bureau of Insular Affairs.

CHINA.

The mean strength of all troops, including officers, serving in China during 1915 was 1,378. This force consisted of Infantry, a detachment of Signal Corps, Hospital Corps, and noncommissioned staff, all white.

ADMISSION RATES.

The admission rate for all causes was 1,438.32, that for disease 1,328.74 and that for external causes 109.58, which are, with the exception of the latter, all higher than for the year 1914. The diseases causing the highest admission and noneffective rates are shown in the following tabulations:

The principal diseases for China—Admission rates for American troops, officers and enlisted men.

	Officers and enlisted men.		Enlisted men.	
	1915	1914	1915	1914
Venereal diseases.....	488.39	381.30	504.12	396.37
Constipation.....	80.55	50.00	83.15	56.36
Tonsillitis.....	77.65	40.33	78.65	41.07
Diarrhea and enteritis.....	48.62	57.74	47.94	57.31
Alcoholism (all).....	32.65	39.41	33.71	41.07
Influenza.....	29.03	20.16	26.22	19.10
Bronchitis.....	27.57	30.25	26.22	33.05
Lymphadenitis, nonvenereal.....	27.57	18.33	28.46	19.10
Rheumatism, muscular.....	24.67	31.16	24.72	32.47
Malarial fevers.....	23.22	22.00	21.72	20.06
Furuncle.....	15.24	7.33	15.73	7.64
Rheumatism, articular (all).....	10.88	4.68	11.24	3.82
Appendicitis.....	10.16	8.25	9.74	8.00
Tuberculosis (all).....	5.08	6.42	5.24	6.00
Mumps.....	5.08	.92	5.24	.96
Pneumonia (lobar).....	4.35	10.08	4.49	10.51
Pleurisy.....	4.35	.92	4.49	.96
Dysentery.....	1.45	9.17	1.50	8.00

Noneffective rates for American troops, officers and enlisted men.

	Officers and enlisted men.		Enlisted men	
	1915	1914	1915	1914
Venereal diseases.....	13.57	15.39	14.01	16.08
Lymphadenitis, nonvenereal.....	1.15	1.06	1.19	1.10
Tonsillitis.....	1.06	.41	1.07	.41
Tuberculosis (all).....	.70	.92	.73	.96
Constipation.....	.60	.39	.71	.40
Rheumatism, muscular.....	.57	.47	.56	.46
Bronchitis.....	.53	.39	.53	.37
Diarrhea and enteritis.....	.48	.40	.46	.41
Malarial fevers.....	.42	.29	.40	.27
Mumps.....	.40	.02	.41	.02
Influenza.....	.38	.32	.25	.27
Alcoholism (all).....	.37	.34	.38	.36
Appendicitis.....	.31	.51	.31	.53
Dysentery.....	.28	.31	.26	.26
Furuncle.....	.28	.04	.26	.04
Pneumonia (lobar).....	.27	.57	.28	.60
Rheumatism, articular (all).....	.23	.12	.23	.07
Pleurisy.....	.23	.01	.24	.01

DISCHARGE ON CERTIFICATE OF DISABILITY.

The discharge rate for disability was 9.74 per 1,000 for all causes.

DEATHS.

The death rate was 4.35 per 1,000, the rate for disease being 2.90, and that for external causes 1.45. The death rate was lower than for 1914, being 5.50 for the latter year.

Tables Nos. 3, 73, and 76 give all figures for the troops serving in China for the year 1915.

The rates would indicate that the general health conditions have decidedly deteriorated during the year 1915, although not so marked as last year (1914) over 1913. An appreciable increase in the admission rate for venereal diseases is noted, with a decrease, however, in the noneffective rate for the same disease.

TABLE NO. 46.—Comparison of rates for the several countries garrisoned by the United States Army.

COMPARISON OF RATES (PER 1,000 OF MEAN STRENGTH) YEARS 1914-15, OFFICERS AND ENLISTED MEN.

	Admissions.		Noneffective.		Discharges.		Deaths.	
	1915	1914	1915	1914	1915	1914	1915	1914
American troops, excluding officers:								
United States.....	696.04	622.28	25.77	23.41	13.60	14.82	5.31	4.87
Alaska.....	378.65	408.14	8.71	10.17	11.80	8.74	2.54	8.35
Philippine Islands.....	976.88	865.79	28.70	30.56	23.22	10.62	2.87	3.64
China.....	1,438.32	1,063.24	34.45	28.88	9.74	3.82	4.35	5.50
Hawaii.....	568.50	523.58	20.24	18.69	10.92	9.02	3.26	1.81
Panama, Canal Zone.....	859.22	938.35	25.63	36.45	13.03	10.94	2.46	3.21
The Army.....	735.97	657.73	25.77	23.98	14.26	12.99	4.57	4.53
Native troops (enlisted):								
Porto Rican Regiment.....	555.07	615.28	22.78	21.64	7.34	8.97	4.41	4.24
Philippine Scouts.....	573.84	714.14	15.68	20.30	11.44	9.56	2.54	3.19

	Venereal diseases.				Malarial fevers.				Tuberculosis.			
	Admissions.		Noneffective.		Admissions.		Noneffective.		Admissions.		Noneffective.	
	1915	1914	1915	1914	1915	1914	1915	1914	1915	1914	1915	1914
American troops, including officers:												
United States.....	79.95	85.84	3.84	3.58	12.37	10.74	0.27	0.24	2.68	2.72	2.33	2.24
Alaska.....	34.31	20.88	.53	.29	1.27	2.09	.01	.04	1.27	1.04	.15	.33
Philippine Islands.....	176.88	174.86	7.70	9.78	61.68	46.97	1.13	1.29	6.08	7.05	.47	.60
China.....	488.39	381.30	13.57	15.39	23.22	22.00	.42	.29	5.08	6.42	.70	.92
Hawaii.....	95.76	65.07	4.78	3.41	1.69	1.33	.05	.03	3.49	3.02	.27	.23
Panama, Canal Zone...	132.48	131.50	5.05	6.62	85.55	205.20	2.27	7.67	5.93	2.41	.35	.16
The Army.....	103.07	105.73	4.59	4.51	22.18	20.16	.48	.57	3.44	3.34	1.79	1.78
Native troops:												
Porto Rican Regiment..	89.57	66.48	4.82	3.84	8.81	12.73	.35	.23	1.47	1.41	.19	.43
Philippine Scouts.....	34.33	57.57	1.96	3.66	80.11	201.80	1.54	3.48	4.54	6.57	.58	.82

ARMY TRANSPORTS.

The sanitary condition of the Army transports and the accommodations provided for troops and passengers have been satisfactory.

With one exception, hospital accommodations were reported ample. On the homeward voyage of the *Sheridan* in April and May, 86 patients were received by transfer from Manila and Honolulu, in addition to the casualties admitted from time to time from command, necessitating the placing of 20 or more patients in the troops quarters of hold.

During the voyage of the *Sherman* from San Francisco to Manila in January, 16 cases of mumps and 19 cases of measles occurred. On the next voyage of the same transport in April, 22 cases of mumps and 3 cases of measles developed.

Twenty-six cases of mumps developed on the transport *Thomas* between February 5 and March 8 while en route to Manila. One case occurred at Manila, and one case during the return voyage.

A case of smallpox was found among casualties coming from Fort Mills, P. I., on October 14, prior to the sailing of the *Logan* from Manila. The patient was taken to the San Lazaro Hospital, and isolation ward and quarters of casualties disinfected.

The following is a statement of enlisted men carried between the several ports during the year:

San Francisco to Honolulu.....	3, 978
San Francisco to Manila.....	5, 445
Honolulu to Manila.....	106
Manila to Nagasaki.....	8
Manila to Honolulu.....	21
Manila to San Francisco.....	6, 397
Honolulu to San Francisco.....	1, 946
Nagasaki to San Francisco.....	273
Total.....	18, 174

Some difficulty has been experienced by transport surgeons in obtaining from the casual officer, prior to arrival at port of destination, the health records (descriptive lists) of enlisted men from the Navy and Marine Corps given transportation on Army transports. This office has recommended that health records be sent to the ship's surgeon instead of to the casual officer.

GENERAL HOSPITALS.

LETTERMAN GENERAL HOSPITAL, SAN FRANCISCO, CAL.

This hospital is used as a base hospital for the Philippines and Hawaii; a post hospital for the Presideo, San Francisco, Fort Winfield Scott and several smaller posts in the harbor of San Francisco, and a general hospital for the western part of the country. It is the largest general hospital in the Army.

During the year the following new buildings have been completed: Addition A to nurses' dormitory, ward for special surgical cases, garage, and storehouse for combustibles.

The number of patients admitted during the year, including civilians and general prisoners, was 3,195, being an increase of 178 over the preceding year. There were 183 cases remaining in hospital December 31, 1914, making a grand total of 3,378 patients treated in the hospital during the year. Of this number 2,433 were officers and enlisted men, 46 general prisoners, and 899 others. There were 1,940 medical cases, 907 surgical, 293 venereal, and 234 mental. The daily average number of patients was 283.86. Of this number 21.28 were officers, 214.38 enlisted men, 4.63 general prisoners, and 43.58 others. The average number of days in hospital for each case was as follows:

	Officers.	Enlisted men.	General prisoners.	Civilians.	
				Male.	Female.
Medical.....	46.00	34.83	26.45	20.75	17.00
Surgical.....	56.58	21.17	46.36	15.23	11.89
Venereal.....	74.00	34.10	50.50	35.77	21.00
Mental.....	58.00	65.61	130.00	26.62	4.00

The following tables show the movement of the sick, together with the principal sources of admission, during the calendar year 1915:

	Officers and enlisted men.	General prisoners.	Civilians.	Total.
ADMISSIONS.				
Command.....	122	.....	27	149
Transfer.....	2,115	41	16	2,172
Otherwise.....	54	.....	820	874
Remaining, 1914.....	142	5	36	183
Total.....	2,433	46	899	3,378
DISPOSITIONS.				
Duty.....	1,410	26	6	1,442
Died.....	35	1	36	72
Discharged for disability.....	474	.....	.....	474
Deserted.....	10	.....	.....	10
Discharged, expiration of term.....	25	2	.....	27
Transferred to Government Hospital for the Insane.....	21	.....	.....	21
Transferred to Fort Bayard, N. Mex.....	93	.....	.....	93
Transferred to other hospitals.....	8	2	1	11
Otherwise disposed of.....	85	6	803	894
Remaining, 1915.....	272	9	53	334
Total.....	2,433	46	899	3,378

There were 72 deaths in all during the year, 35 officers and enlisted men, 1 general prisoner, and 36 civilians and others. The principal causes for these deaths are given below:

Tuberculosis of the lungs.....	8
Cancers and other malignant tumors.....	4
Simple peritonitis (nonpuerperal).....	4
Bright's disease.....	4
Purulent infection and septicemia.....	3
Organic diseases of the heart.....	3
Broncho-pneumonia.....	3
Diseases of the intestines.....	3
Simple meningitis.....	2
Cerebral hemorrhage (traumatic).....	2
Pericarditis.....	2
Pneumonia (lobar).....	2

In addition to the above list 4 civilians were suffocated in burning building.

There were 474 discharged on certificate of disability. Of this number 403 were not in line of duty and 71 in line of duty. The principal causes were as follows:

Mental alienation.....	125
Diseases of the organs of locomotion.....	65
Tuberculosis of the lungs.....	39
Epilepsy.....	24
Organic diseases of the heart.....	23
Other diseases of the nervous system.....	16
Other external violence.....	16
Syphilis.....	14
Neuralgia and neuritis.....	12
Diseases of the bladder.....	12
Gonococcus infection.....	10
Diseases of the joints.....	10

The following is a statement of the admissions and dispositions of insane patients during the year:

Movements of the insane.

Disposition.	Officers and enlisted men.	General prisoners.	Others.	Total.
Returned to duty.....	9	2		11
Left hospital.....			3	3
Discharged on certificate of disability at this hospital.....	130			130
Died.....	2		2	4
Transferred to recruiting officers for disposition.....	8			8
Transferred to the Government Hospital for the Insane.....	21			21
Sent home for discharge.....	6			6
Discharged without honor for fraudulent enlistment.....	1			1
Total.....	177	2	5	184

An active surgical clinic is maintained at this hospital, the following being a condensed tabular statement of the surgical operations:

Operations.

Operations.	Officers.	Enlisted men.	Total.	Retired officers.	Retired enlisted men.	General prisoners.	Army Nurse Corps.	Civilians.	Total.	Grand total.
Cranium.....		2	2							2
Face.....		1	1					1	1	2
Neck.....		5	5		2			7	9	14
Upper extremity.....		21	21	1		1		12	14	35
Thorax.....		7	7	1	1			3	5	12
Abdomen (laparotomy).....	9	106	115	2	4	6	2	86	100	215
Genito-urinary.....	4	35	39	1		3		18	22	61
Rectum and anus.....	6	30	36		1			11	12	48
Gynecological, internal.....							1	64	65	65
Gynecological, external.....								61	61	61
Lower extremity.....	18	50	68		1			17	18	86
Major (not included).....								3	3	3
Minor (not included).....	2	76	78		6	16		38	60	138
Obstetrical.....								29	29	29
Total.....	39	333	372	5	15	26	3	350	399	771

Seven hundred and seventy-one operations were performed, as against 528 last year (the eye, ear, nose, and throat cases not included), an increase of 243. In addition and not listed in the above statement, there were 5,165 dressings done and emergency cases treated in the dressing room of the operating pavillion, and 8,240 in the dressing room of the surgical ward for infected cases. There were also made 163 gynecological and obstetrical examinations. There was a total of 50 confinements cared for during the year, one of which, puerperal eclamptic case, resulted in death.

On September 6, 1915, orthopedic work was begun and 42 cases were treated.

The following is a statement of the work done in the eye, ear, nose, and throat clinic:

	Hospital cases.	Out cases.	Total.
Officers.....	68	124	192
Enlisted men.....	501	296	797
Families of officers and enlisted men.....	184	422	606
Civilian employees.....	11	46	57
Army Nurse Corps.....	1	66	67
Civilians, including Civil War veterans.....	35	83	118
Total.....	800	1,037	1,837

There were 1,837 cases treated, and 463 operations performed during the year.

There were 368 cases of all classes refracted.

The dentist on duty at the hospital reports 1,248 persons treated for affected teeth, with 3,363 sittings.

A large department laboratory is maintained for the use of the hospital and for the special work of the posts in the Western Department. The report of the work done will be found under the general head of "Laboratories."

The mean strength of the personnel on duty at this hospital for the year was:

Officers.....	12. 10
Dental surgeons.....	2. 02
Acting dental surgeons.....	. 00
Army Nurse Corps.....	43. 56
Hospital Corps.....	162.00

There were 27 civilians employed by the Medical Department, and 11 by the Quartermaster Corps on duty in the hospital during the year.

WALTER REED GENERAL HOSPITAL.

This hospital is located at Takoma Park, D. C., near the northern border of the District. It serves as the general hospital east of the Mississippi and as the post hospital for Washington Barracks. The patients from the latter place are transferred in automobile ambulances of which this hospital has, at present, four, while another is being constructed.

As heretofore, there are but two sets of officers' quarters at the hospital, although nine medical officers are assigned to duty there. The rental of quarters for these officers is an item of large expense and results in their being unsatisfactory and inconveniently housed both for their comfort and their work.

The reservation and buildings are kept in good condition, though improvements are needed on the roads and it is hoped that they can be accomplished during the coming spring or summer. An improvement recently completed is a new concrete roadway back of the main hospital building, which, together with its drainage system, serves not only to make the service of wagons easier and cleaner, but also to divert much surface drainage that formerly ran directly toward, and partly through or into the basement.

Two new wards for enlisted men have been opened since the time of the last annual report, and are found very satisfactory. Another small ward is completed and available for use but it has not yet been put into use. Work is progressing on a basement ward to be used for psychopathic cases, and it should be completed by March.

The X-ray laboratory has been remodeled and the following improvements made:

(1) Additional apparatus installed—Coolidge tube, verticle roentgenoscope, overhead wiring system, Alberene tank, illuminating viewing box.

(2) Complete renovation of X-ray room; installation of labyrinth to dark room.

(3) Two hundred and twenty-four cases were X-rayed (some retaken many times for comparison). Excellent work is now being done.

The laboratory does only simple routine work for clinical purposes, all Wassermann tests, blood cultures, laboratory examination of pathologic specimens, and other special work being done at the Army Medical School. It would not be possible to do it all here without an increase of personnel, and the school's work is very satisfactory.

Requisition has been made for apparatus and supplies that will permit of the undertaking of the new work on blood chemistry,

especially in cases of renal disease, which is now coming into use. This work will be taken up as soon as possible.

The hydrotherapeutic department has been put to much use of late and has proven very satisfactory. At present the hospital is fortunate in having the services of an enlisted man who is skilled in that work. He receives extra pay from the hospital fund. It is desirable and just that the Government should allow extra pay for the position. The work is arduous as well as skilled and is entirely for the benefit of the Government, not for the benefit of the detachment on duty here, whose fund now pays.

A similar opinion is entertained as to the pay of maids for work in the rooms of women patients. Maids are necessary, the detachment (soldiers) can not be expected to work in women's rooms, yet their fund pays for maids.

The hospital messes, both for sick officers and for enlisted men are excellent. It is doubted if they could be much better. They are now run at very much lower cost than formerly.

The discipline is, in general, very good, but the hospital's nearness and convenience to a metropolis and the monotony of sickness make for derelictions in the way of drink by too many Hospital Corps men and patients. Increased efforts are to be made to provide interest and amusement at the hospital. It is thought that a gymnasium should be established for the use of men on duty here. Among these are some excellent enlisted men, but many are not of as good type as could be desired. It is doubted, however, if the average can be made higher while the pay remains what it is now.

In view of the certain increase in the use of automobile ambulances, it is desirable that there be established the grade of chauffeur sergeants in the Hospital Corps.

There is a shortage of one man in the personnel of the Quartermaster Corps at this station. The allowance of 12 men for this post is inadequate, necessitating the detail of 6 Hospital Corps men for this duty.

The work of the hospital is somewhat interfered with by details of officers to work outside the hospital, such as instruction work at the Army Medical School. These details have not in any way interfered with the adequate and proper care of the sick, but they do occasion inconvenience in such internal matters as officer-of-the-day duty, instruction of the Hospital Corps, disability boards, consultation boards and committees and attendance at Journal club and clinical meetings. These last two duties have been added within a few months to those formerly obtaining. They are thought to be helpful to the medical officers as well as beneficial to the patients, and to make for the increased efficiency of the hospital. The clinics have also been attended by the postgraduate students at the Army Medical School. Medical and surgical clinics are held alternately.

The members of the Army Nurse Corps on duty here have in general rendered excellent service. The number of nurses is adequate for ordinary duties but is a bit small for times of stress and to provide for sickness among the nurses and for their leaves of absence.

Because of the peculiar plan of this hospital, nursing is arduous here and a larger proportionate number of nurses is needed than in a hospital built on the Letterman plan.

The number of patients admitted during the year, including civilians, was 1,175. This was an increase of 191 over the preceding year.

The average number of days in hospital for each case was as follows:

	Officers.	Enlisted men.	Civilians.	
			Male.	Female.
Medical.....	35.23	22.23	18.08	15.00
Surgical.....	21.82	38.13	9.19	15.94
Veneral.....	11.50	40.54	21.00	.....
Mental.....	24.00	44.75	13.00	.....

The following table shows the movement of the sick, together with the principal sources of admission, during the calendar year 1915, including civilians. No general prisoners were admitted.

	Officers and enlisted men.	General prisoners.	Civilians.	Total.
Admissions:				
Command.....	107	.....	9	116
Transfer.....	589	.....	5	594
Otherwise.....	72	.....	303	465
Remaining Dec. 31, 1914.....	78	.....	15	93
Total to be accounted for.....	846	.....	422	1,268
Dispositions:				
Duty.....	608	.....	7	615
Died.....	16	.....	8	24
Discharged for disability.....	64	.....	.....	64
Deserted.....	2	.....	.....	2
Discharged, expiration of term.....	5	.....	.....	5
Transferred to Government Hospital for Insane.....	5	.....	.....	5
Transferred to Fort Bayard, N. Mex.....	12	.....	.....	12
Transferred to other hospitals.....	.....	.....	.....	.....
Otherwise disposed of.....	49	.....	336	435
Remaining Dec. 31, 1915.....	85	.....	21	106
Total.....	846	.....	422	1,268

There were 24 deaths. Of this number 12 were enlisted men, 3 were retired officers, 1 a retired soldier, 7 civilians, and 1 member of the Army Nurse Corps.

The following were the causes of death:

Post operative shock.....	3	Pernicious anemia.....	1
Diabetes, mellitus.....	2	Aortic regurgitation.....	1
Nephritis, parenchymatous.....	2	Cancer of stomach.....	3
Nephritis, interstitial.....	2	Aortic aneurism.....	1
Lobar pneumonia.....	1	Ataxic paraplegia.....	1
Sarcoma.....	2	Broncho pneumonia.....	1
Tumor of cecum.....	1	Cerebral hemorrhage.....	1
Tuberculosis, pleural cavities and peritoneum.....	1	Renal insufficiency and tuberculosis of lungs and bladder.....	1

There were 64 discharged on surgeons' certificate of disability. Of this number 40 were in line of duty and 24 were not in line of duty.

The causes were as follows:

Causes of disability.	Yes.	No.	Total.
Vesiculitis, seminal.....		2	2
Psychopathic constitution.....		5	5
Injuries and diseases of organs of locomotion.....	7	3	10
Pain and tenderness, post operative.....	1		1
Diseases of organs of vision.....	1	1	2
Arthritis, gonorrheal.....		3	3
Landry's paralysis.....	1		1
Eneuresis.....		1	1
Syphilis.....		1	1
Paresis.....	1		1
Ankylosis.....	2		2
Arthritis, productive.....	1		1
Valvular heart disease.....	2		2
Lymph stasis.....	1		1
Abscesses, venereal.....		1	1
Ulcer, gastric.....		1	1
Spondylitis, traumatic.....	1		1
Carcinoma of rectum, colloid.....	1		1
Diseases of ear.....	2		2
Drug habit, cocaineism.....		1	1
Hyperthyroidism.....	2	2	4
Caries of spine, tubercular.....	1		1
Adhesions, post operative.....	1	1	2
Fistula, post operative.....	1		1
Epilepsy.....	1	1	2
Gastric neurosis.....	1		1
Regurgitation of food, post operative.....	1		1
Aphonia.....	1		1
Amputations.....	1		1
Empyema.....	2		2
Paranoid state.....		1	1
Fracture of vertebræ.....	2		2
Neuritis.....	1		1
Exophthalmic goitre.....	1		1
Dysentery, entamoebic.....	1		1
Paralysis and total deafness.....	1		1
Tuberculosis, right ankle.....	1		1
Total.....	40	24	64

The following is a statement of admissions and dispositions of insane patients during the year:

	Officers and enlisted men.	Civilians.
Returned to duty.....	3	
Left hospital.....		3
Discharged on surgeons' certificate of disability.....	3	
Transferred to Government Hospital for Insane.....	5	
Left hospital on sick leave.....	1	
Discharged.....	1	
Remaining.....	1	
Total.....	14	3

An active surgical clinic is maintained at the hospital, the following being a condensed tabular statement of the surgical operations:

	Officers.	Enlisted men.	Total.	Retired officers.	Retired enlisted men.	Accepted recruits.	General prisoners.	Army Nurse Corps.	Civilians.	Total.	Grand total.
Eye.....	2	2	4						12	12	16
Nose.....	32	84	116	1					45	46	162
Ear.....	1	4	5						8	8	13
Throat.....	8	24	32					1	143	149	181
Face.....		5	5								5
Neck.....	1	1	2						1	1	3
Upper extremity.....		8	8						7	7	15
Thorax.....		1	1						2	2	3
Abdomen, laparotomy.....	11	39	50	1	2				46	49	99
Gynecological, external.....									33	33	33
Gynecological, internal.....									8	8	8
Lower extremity.....	3	14	17						4	4	4
Major, not included.....	2	7	9					4	1	5	14
Minor, not included.....	10	44	54						24	24	78
Total.....	70	233	303	2	2			5	339	343	651

Included in this list are 40 operations for appendicitis, 24 for hernia, 15 for hemorrhoids, and 44 gynecological. Four women were delivered at term. Of operations performed, 3 were followed by death.

The following is a statement of the work done in the laboratory during the year:

Examinations of—	
Urine.....	3,714
Blood.....	767
Sputum.....	842
Feces.....	1,029
Stomach contents.....	109
Urethral discharges.....	427
Miscellaneous.....	283
Total.....	7,171

The following is a statement of the apparatus in use and the work done in the hydrotherapy plant and gymnasium during the year. There are four rooms occupied.

Apparatus in use:	
Punching bag and platform.....	1
Rowing machine.....	1
Weight-lifting machine.....	1
Medicine balls.....	1
Indian clubs, pairs.....	5
Boxing gloves, sets.....	1
Added during 1915—	
Dumb-bells, pairs.....	3
Plinth.....	1
Baking apparatus:	
Body baking apparatus.....	1
Local baking apparatus.....	2
Electric vibrator.....	1

Baths:

Cabinet.....	1
Needle and shower.....	1
Douche jet.....	1
Tub.....	1
Sitz.....	1
Carbonated.....	1
Pack, hot, cold, or dry.....	1
Drip sheet.....	1

SUMMARY OF TREATMENTS GIVEN.**Baths:**

Needle and shower.....	3,096
Douche jet.....	789
Douche, Scotch.....	2,847
Douche, fan.....	1,923
Douche, perineal.....	144
Tub.....	387
Carbonated.....	32
Sitz.....	63
Pack, cold.....	89
Pack, hot wet.....	132
Electric cabinet.....	2,044
Vibration.....	731
Massage.....	4,003
Baking.....	1,643
Gymnasium.....	1,164
<hr/>	
Number of patients treated.....	156
Patients remaining under treatment, Dec. 31, 1915.....	27
<hr/>	
Total.....	183

Two attendants, members of the Hospital Corps, gave the treatments the greater part of the year. During the summer only one attendant was available. One of the present attendants is very proficient. His assistant is still under instruction.

The following is a statement of the work done in the eye, ear, nose, and throat clinic:

Officers and enlisted men.....	408
Families of officers and enlisted men.....	154
Civilian employees of the Government.....	14
Army Nurse Corps.....	6
All others.....	28
<hr/>	
Total patients treated during 1915.....	610

Personnel on duty at hospital.—The mean daily strength of the personnel on duty during the year was as follows:

Medical officers.....	10.96
Post noncommissioned staff.....	1.00
Hospital Corps and Quartermaster Corps.....	123.38
Army Nurse Corps.....	24.33
<hr/>	
Mean aggregate.....	159.67

The character of the personnel received at this post (28 recruits) was not satisfactory. Facilities for drill and instruction as Hospital Corps men are lacking, and the multifarious duties require men of service and above the average.

GENERAL HOSPITAL, FORT BAYARD, N. MEX.

The general hospital at Fort Bayard is devoted to the treatment of pulmonary tuberculosis in soldiers and in beneficiaries of the soldiers' home.

Fort Bayard is situated in Grant County, N. Mex., in the extreme southwestern part of the State. On account of the southern location of the hospital, it is generally assumed by those unfamiliar with the local conditions that the climate is very warm. But the altitude, 6,165 feet, largely counterbalances the influence of the southern sun and renders the climate cool rather than warm. The usual vicissitudes of the seasons are experienced. In the winter there is occasional snow; frosts occur nearly every night, rarely there is severe cold approaching the temperature of zero Fahrenheit, but such cold is of brief duration. On the whole, the winters are relatively warm, dry, and clear. In summer the heat is tempered by the dryness of the air, with the resulting diathermancy. The fact that summer is the time of the chief precipitation also exercises an important effect upon the temperature, clouds and rain very frequently being present during what would otherwise be the hottest portion of the days. These factors result in producing singularly cool weather, the summer being far more comfortable for the human organism, whatever the thermometer readings, than that of the greater part of the Northern States of the East and of the Mississippi Valley. For the treatment of tuberculosis, the peculiar excellence of the climate of Fort Bayard consists in the fact that it is one that avoids harmful extremes of temperature, yet in its diurnal and annual variations affords a sufficient stimulus to the human organism to favor activity of the metabolic processes.

An additional ward for ambulant patients is under construction. This building consists of a central structure containing offices and storerooms, with two wings used as wards. The material used is cement brick pebble dashed, with tile roof. The capacity of the building is 40 patients.

The number admitted during the year, including beneficiaries of the soldiers home, civilians, and general prisoners was 738, being an increase of 7 over the preceding year. The average number of days in hospital for each case was as follows:

	Officers.	Cadets.	Enlisted men.	Beneficiaries of the soldiers, home.	General prisoners.	Civilians.	
						Male.	Female.
Medical.....	125.79	281.67	109.56	134.26	57	103.41	57.13
Surgical.....			20.69			13.00	16.90
Venereal.....			23.75				
Mental.....			(1)				

¹ One tuberculous case later developed insanity and is counted among the medical.

The following table shows the movement of the sick, together with the principal sources of admission during the calendar year 1915, civilians and general prisoners being included:

	Officers and enlisted men.	General pris- oners.	Civil- ians.	Benefi- ciaries of the soldiers, home.	Total.
Admissions:					
Command.....	118		33		151
Transfer.....	251				251
Otherwise.....	5		58	273	336
Remaining, 1914.....	117	3	21	184	325
Total.....	491	3	112	457	1,063
Dispositions:					
Duty.....	178		25		203
Died.....	15		12	26	53
Discharged for disability.....	103				103
Deserted.....	1				1
Discharged expiration term.....	6				6
Transferred to Government Hospital for Insane..	1				1
Transferred to Hot Springs, Ark.....	3				3
Transferred to other hospitals.....					
Otherwise disposed of.....	12	3	48	267	330
Remaining, 1915.....	172		27	164	363
Total.....	491	3	112	457	1,063

There were 53 deaths. Of this number 11 were of enlisted men, 1 of a retired soldier, 11 of civilians, and 26 of beneficiaries of the soldiers' home. The causes of death were:

Tuberculosis.....	46	Sarcoma of the lung.....	1
Septic endocarditis.....	2	Shock following operation for em-	
Dilatation of the heart.....	1	pyema.....	1
Chronic ulcerative colitis.....	1	Fracture of skull.....	1

There were 103 discharged on certificate of disability. Of this number, one was not in line of duty, and 102 in line of duty. The causes were as follows:

	In line of duty.	Not in line of duty.
Tuberculosis, pulmonary.....	100	1
Pleurisy.....	1	
Empyema, nontuberculous	1	
	102	1

One enlisted man was transferred to the Government Hospital for the Insane.

The following is a condensed tabular statement of the surgical operations performed:

	Offi- cers.	Enlisted men.	Total.	Retired enlisted men.	Army Nurse Corps.	Civil- ians.	Total.	Grand total.
Cranium.....		2	2					2
Nose.....	2	7	9		2	32	34	43
Ear.....		3	3		1	2	3	6
Throat.....		12	12		1	33	34	46
Thorax				2		1	3	3
Abdomen (laparotomy).....		1	1			10	10	11
Gynecological, external.....						2	2	2
Gynecological, internal.....						2	2	2
Lower extremities.....		2	2			1	1	3
Major (not included).....		1	1					1
Minor (not included).....		3	3			4	4	7
Genito-urinary.....						2	2	2
Anus and rectum.....		2	2			2	2	4
Total.....	2	33	35	2	4	91	97	132

The following is a statement of the work done in the laboratory during the year:

Examinations of:		Examinations of:	
Urine.....	1, 025	Urethral discharges.....	4
Blood.....	251	Miscellaneous.....	5, 257
Sputum.....	10, 159	Total.....	16, 766
Feces.....	67		
Stomach contents.....	3		

The number of completed cases of pulmonary tuberculosis in 1915 was 446. Important complications were present as follows:

Tuberculous laryngitis.....	60	Nephritis.....	6
Otitis media.....	40	Tuberculous epididymitis.....	3
Syphilis.....	48	Tuberculous peritonitis.....	3
Valvular heart disease.....	2	Pneumothorax.....	2
Fistula in ano.....	9	Pyopneumothorax.....	2
Tuberculous enteritis.....	7	Tuberculous hydrothorax.....	2
Tuberculous spondylitis.....	5	Tuberculous cystitis.....	2

Aortic aneurism, tuberculous prostatitis, and septic endocarditis, 1 of each.

The result of treatment in completed cases ¹ of pulmonary tuberculosis was as follows:

Class.	Number.	Ap- parently cured.		Arrested.		Ap- parently arrested.		Quies- cent.		Im- proved.		Unim- proved.		Died.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Incipient.....	54	3	5.55	13	24.00	23	42.59	3	5.55	9	16.66	3	5.55	.....	.....
Moderately advanced...	175	9	5.14	11	6.28	14	8.00	18	10.28	84	48.00	33	18.85	6	3.43
Far advanced.....	216	.....	.....	1	.46	.....	.....	4	1.85	81	37.50	87	40.25	43	19.90
Acute miliary.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	100.00
Total.....	446	12	2.69	25	5.60	37	8.29	25	5.60	174	39.01	123	27.57	50	11.21

The following table shows the result of treatment in all cases of pulmonary tuberculosis:

Class.	Number.	Ap- parently cured.		Arrested.		Ap- parently arrested.		Quies- cent.		Im- proved.		Unim- proved.		Died.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Incipient.....	82	9	10.97	16	19.51	26	31.70	11	13.41	17	20.73	3	3.65	.....	.....
Moderately advanced...	356	17	4.77	20	5.61	27	7.58	31	8.70	196	55.05	59	16.57	6	1.68
Far advanced.....	361	.....	.....	2	.55	6	1.38	4	1.10	167	46.26	140	38.78	43	11.91
Acute miliary.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	100.00
Total.....	800	26	3.12	38	4.75	59	7.25	46	5.75	380	47.50	202	25.25	50	6.25

¹ By "completed cases" are meant all cases which have terminated their connection with the hospital in any way.
² Includes 75 cases under treatment less than 1 month.

The mean daily strength of the personnel on duty during the year was as follows:

Medical officers.....	11.79
Other officers.....	1.46
Post noncommissioned staff.....	1.89
Hospital Corps and Quartermaster Corps.....	148.35
Army Nurse Corps.....	22.31

ARMY AND NAVY GENERAL HOSPITAL, HOT SPRINGS, ARK.

This hospital was originally intended especially for patients having diseases in which hydrotherapeutic treatment is indicated. Paragraph 1441, Army Regulations, 1913, states that—

The Army and Navy General Hospital, Hot Springs, Ark., is under the direction of the Secretary of War and is devoted to the treatment of the officers and enlisted men of the military and naval service of the United States, cadets at the United States Military Academy, officers of the Revenue-Cutter (now Coast Guard) Service, officers of the Public Health Service, and honorably discharged soldiers and sailors of the Regular and Volunteer Army and Navy of the United States, for such diseases as the waters of the hot springs of Arkansas have an established reputation in benefiting.

This hospital has served in part as a general hospital for the Southern Department and for the Second Division.

An addition to the bathhouse has been completed to accomodate officer patients, being fitted with up-to-date therapeutic equipment, the flooring constructed of tile and the wainscoting and partitions of marble.

The Hospital Corps barracks, which was completed during November, 1915, is designed to accomodate 60 men and contains reading room, barber shop and post exchange in the basement.

The double set of noncommissioned officers' quarters has been completed.

An addition to ward building Nos. 3 and 4 has been built, thus increasing the bed capacity of the hospital by 50 beds. It is purposed to use a section of this addition for convalescent officer patients, thereby increasing the facilities for caring for this class of patients by 10 beds.

A diet kitchen has been added to Ward No. 1, so as to facilitate the serving of this ward, in which are treated the most serious cases admitted to the hospital. This addition, 20 by 20 feet, has a tile floor and tile wainscoting, and is equipped with gas range, water heater, dish washer, food warmers, etc.

An operating suite has been completed which is connected with the administration on one side, and with ward 2 on the other, so as to make it accessible to both the officers' section and the surgical ward. This addition contains a modern operating room, tiled throughout, with skylight, electric overhead light, and electric wall outlets for the use of special electrical instruments during operations. The sterilizing room is equipped with a new combination sterilizer outfit, three modern lavatories for hand sterilization and new instruments and dressing cabinets. In addition there is an etherizing room and a surgeon's dressing room.

Among other improvements made during the year may be mentioned the laying of tile floors in the toilet rooms of wards 1 and 2, replacing with Vermont marble the old slate partitions to stalls and urinals replaced with floor appliances; wooden floors in lavatories of

wards 2 and 3 replaced with tile, tile wainscoted, and old lavatories replaced by modern type, while each new building in connection with the hospital has been connected with the post system of drainage, fire mains, roads, walks, mineral water, steam heat, sewers, electric lights, and in the case of the operating room and noncommissioned officers' quarters with gas and city water, to complete which considerable construction work was required.

The total number of admissions during the year was 860, an increase of 75 over the preceding year. Of this number 58 were officers, 169 enlisted men, 9 retired officers, 43 retired enlisted men, and 581 civilians, including honorably discharged soldiers and sailors of the Army, Navy, and Marine Corps. The daily average number of patients treated in hospital was 102.25.

The following tables show the principal causes of admission and method of disposition of all cases:

Remaining in hospital Dec. 31, 1914..... 117

Admissions:

Alcoholism.....	3
Disease of the respiratory system.....	4
Disease of the heart.....	24
Disease of the urinary system.....	6
Dysentery.....	5
Eczema.....	9
Myalgia.....	16
Rheumatism, articular.....	93
Rheumatism, muscular.....	22
Sprains and muscular strains.....	5
Gastritis.....	14
Hernia, inguinal.....	11
Appendicitis.....	9
Disease of the kidneys.....	49
Arthritis.....	57
Syphilis and results.....	80
Gonorrhea and results.....	24
Carcinoma.....	8
Disease of the circulatory system.....	134
Malarial infection.....	12
Pulmonary tuberculosis.....	4
All other causes.....	271

Total admissions..... 860

Total to be accounted for..... 977

Dispositions:

Returned to duty.....	196
Died.....	18
Discharged on surgeon's certificate of disability.....	29
Transferred.....	2
Discharged from hospital (civilians).....	626
Otherwise disposed of.....	5
Remaining in hospital Dec. 31, 1915.....	101

Total dispositions..... 977

DEATHS.

Eighteen deaths occurred during the year, including one officer and one enlisted man on the active list of the Army (all others civilian patients), from the following causes:

Carcinoma of upper right quadrant of abdomen, involving right kidney ¹	1
Post operative shock following gastro-enterostomy and appendectomy ²	1
Cancer of the stomach.....	1
Post operative shock following amputation of right thigh.....	1
Uremia.....	2
Pneumonia, catarrhal.....	1
Septicemia.....	1
Diabetes, mellitus.....	1
Nephritis, parenchymatous.....	1
Tuberculosis of the lungs.....	1
Carcinoma, gastric, pyloric.....	1
Atrophic cirrhosis and endocarditis.....	1
Syphilis, tertiary (Gumma of the lungs).....	1
Lobar pneumonia.....	1
Necrosis head of first metatarsal bone, following senile gangrene of great toe, right.....	1
Broncho-pneumonia.....	1
Arteriosclerosis.....	1
Total deaths.....	18

DISCHARGES FOR DISABILITY.

During the year 29 enlisted men were discharged on account of disability; the causes were distributed as follows:

Nephritis, interstitial, chronic.....	3
Nephritis, parenchymatous, chronic, and adhesions to cecum, following appendectomy.....	1
Nephritis, parenchymatous, chronic.....	1
Arthritis, infectious, multiple, chronic.....	1
Arthritis, chronic, right knee.....	1
Arthritis, gonorrheal, chronic, metatarso-phalangeal joints, both feet.....	1
Arthritis, chronic, affecting lumbar vertebræ.....	1
Arthritis, chronic, left sacro-iliac joint.....	1
Neuritis, subacute, involving right brachial plexus.....	1
Neuritis, traumatic, right ulnar nerve.....	1
Neuritis, chronic, right radius.....	1
Neuritis, chronic, traumatic, left external popliteal nerve, with motor paralysis..	1
Neuritis, traumatic, right knee.....	1
Polyarthritis, chronic, both knees, both ankles, and both wrists, caused by septic infection from wound on web of right thumb.....	1
Flat feet.....	1
Sarcoma of right kidney.....	1
Syphilis, intractable.....	1
Exostosis, planter surface of os calcis, bilateral.....	1
Paralysis, partial, left lower limb, following anterior polyomyelitis.....	1
Paralysis of circumflex of right brachial plexus, post syphilitic, with resultant loss of motion in right shoulder.....	1
Psychasthenia, with tendency to self-depreciation and introspection.....	1
Rheumatism, articular, chronic, general, and endocarditis, rheumatic, chronic..	1
Rheumatism, chronic, gonorrheal.....	1
Mitral stenosis, post rheumatic.....	1
Gastritis, chronic, catarrhal, and neuritis left brachial plexus.....	1
Synovitis, chronic, right knee.....	1
Diabetes, mellitus.....	1
Total discharges for disability.....	29

¹ Enlisted man on the active list of the Army.² Officer on the active list of the Army.

SURGICAL OPERATIONS.

Following is a résumé of the surgical work done during the past 12 months:

Name of operation.	Disease or injury.	Num-ber of cases.	Suc-cessful.	Died.	Anesthetic.	
					Ether.	Local.
EYE.						
Transplantations.....	Pterygium.....	15	15	.....	.....	15
Extraction.....	Cataract, senile.....	7	7	.....	.....	7
Iridectomy.....	Glaucoma.....	1	1	.....	.....	1
NOSE.						
Curettment and drainage.....	Occlusion left frontal sinus....	1	1	.....	1	.....
Submucous resection.....	Deflected nasal septum.....	7	7	.....	7	.....
MOUTH AND PHARYNX.						
Tonsillectomy.....	Hypertrophied tonsils.....	18	18	.....	.....	18
ABDOMEN.						
Appendectomy.....	Appendicitis.....	14	14	.....	14	.....
Excision.....	Adhesions between stomach and gall bladder.	1	1	.....	1	.....
Cholecystectomy.....	Cholecystitis.....	2	2	.....	2	.....
Gastroenterostomy.....	Ulcers, multiple, pyloric end of stomach.	1	1	.....	1	.....
Do.....	Pyloric ulcers.....	3	3	.....	3	.....
Do.....	Carcinoma of stomach.....	1	1	.....	1	.....
Cholecystenterostomy.....	Sinus following cholecystostomy.	1	1	.....	1	.....
Partial gastrectomy (Mayo operation).	Carcinoma of stomach.....	1	1	.....	1	.....
Ferguson's modified.....	Inguinal hernia.....	5	5	.....	5	.....
Gastroenterostomy and appendectomy.	Ulcers of stomach, pyloric, and hepatic cirrhosis; appendicitis.	2	1	1	2	.....
Exploratory laparotomy.....	Sarcoma involving right kidney.	1	1	.....	1	.....
Andrew's radical cure.....	Ventral hernia.....	1	1	.....	.....	1
Excision.....	Necrotic area of liver.....	1	1	.....	1	.....
Cholelithotomy with removal of stone from common duct.	Biliary fistula.....	1	1	.....	1	.....
ANUS AND RECTUM.						
Excision of hemorrhoids.....	Hemorrhoids, external.....	3	3	.....	3	.....
Excision.....	Fistula in ano.....	2	2	.....	2	.....
GENITO URINARY.						
Prostatectomy suprapubic.....	Prostatic hypertrophy.....	6	6	.....	6	.....
Cystotomy.....	Septic cystitis.....	5	5	.....	5	.....
Excision.....	Hydrocele of spermatic cord...	1	1	.....	1	.....
Cystotomy suprapubic.....	Vesical calculus.....	1	1	.....	.....	1
Do.....	Prostatic hypertrophy.....	2	2	.....	.....	2
Do.....	Carcinoma of bladder.....	1	1	.....	1	.....
Drainage of seminal vesicles.....	Vesiculitis.....	1	1	.....	1	.....
Orchidectomy.....	Neuralgia, right testicle.....	1	1	.....	1	.....
Excision of sac.....	Hydrocele right tunica vaginalis.	1	1	.....	1	.....
Incision and iodoform injection..	Adenitis, inguinal.....	6	6	.....	5	1
SKIN AND CELLULAR TISSUES.						
Subcutaneous excision.....	Varicose veins.....	1	1	.....	1	.....
Excision.....	Pigmental mould of neck.....	1	1	.....	1	.....
Do.....	Epithelioma of lower lip.....	1	1	.....	1	.....
Do.....	Fibroma over sternum.....	1	1	.....	.....	1
Incision and removal.....	Foreign body in wrist.....	1	1	.....	.....	1
Do.....	Bullet fragment in leg.....	1	1	.....	.....	1
Do.....	Sebaceous cyst left side of neck.	1	1	.....	.....	1
Do.....	Subtendo achilles bursa, left...	1	1	.....	1	.....
Do.....	Exostosis os calcis.....	4	4	.....	4	.....

Name of operation.	Disease or injury.	Num-ber of cases.	Suc-cessful.	Died.	Anesthetic.	
					Ether.	Local.
	BONES.					
Wiring of greater tuberosity to humerus.	Fracture upper end of humerus	1	1	.....	1	.....
Thorocoplasty and partial de-cortication.	Sinus opening lateral chest wall.	1	1	.....	1	.....
Excision.....	Displaced bone fragment from tibialis anticus, following gun-shot fracture.	1	1	.....	.....	1
Arthroplasty.....	Complete ankylosis right knee	1	1	.....	1	.....
Resection of base of each phalanx any and enlarged area of head of first metatarsal bone.	Halux valgus metatarso-phalangeal joint (first), both feet. Osteoarthritis of metatarsophalangeal joint of second, third, fourth, and fifth joint, both feet.	1	1	.....	1	.....
	AMPUTATIONS.					
Amputation of thigh at middle third.	Senile gangrene.....	1	1	.....	1	.....
Amputation of thigh at lower third.	Diabetic gangrene.....	1	1	.....	1	.....

LABORATORY.

Following is an abstract of the laboratory work done during the year 1915:

Wassermanns.....	520
Bacteriological examinations.....	7
Feces.....	55
Blood examinations.....	71
Milk examinations (fat and bacteriological determination).....	31
Sputa.....	34
Phenolsulphonephthalein tests for renal efficiency.....	11
Urine.....	1,391
Tissues, sectional.....	1
Luetin tests.....	115
Urethral smears.....	10
Vaccines.....	7
Spinal fluid examinations.....	9
Total.....	2,262

PERSONNEL ON DUTY AT HOSPITAL.

The mean daily strength of the personnel on duty during the year was as follows:

Medical officers.....	5.78
Other officers (dental surgeon).....	.03
Post noncommissioned staff.....	1.00
Hospital Corps and Quartermaster Corps.....	71.80
Army Nurse Corps.....	7.32
Mean aggregate.....	85.93

DEPARTMENT HOSPITAL, MANILA, P. I.

This hospital is the general hospital for the Philippine Department. It differs from the general hospitals in the United States in that it is not directly under the control of the Surgeon General, but owing to its geographic location it is under the authority of the department commander.

The addition over the officers' ward, to serve as an accommodation for women and children, has been completed, and occupancy took place July 30, 1915. This addition consists of one large ward divided into 10 rooms, is screened and well ventilated on all sides, and has direct communication with the operating room by an electric elevator. Bathrooms adjoin the ward.

An item for painting the outside of all buildings, except recent new construction, was included in the annual estimates for the fiscal year 1916, and the work is now being done. The material for screening the venereal ward has been furnished and the work commenced.

A cement water tower with a 10,000-gallon tank is in course of erection on the eastern part of the hospital grounds to furnish artesian water for use of the hospital from a well 760 feet deep, which it is expected will furnish 25 gallons of water a minute. Upon the completion of this tower the distilling plant will be discontinued.

An alteration much needed at the hospital is another room in the administration building for use as a library and reading room for medical officers. Such a room might be provided by cutting the commanding officer's and the adjutant's offices in two by a partition, or preferably by putting a second story on the whole administration building. This item will be taken up on the annual estimate.

During the year 1915 2,510 cases were admitted to hospital, of which number 82 were officers, 1,750 American enlisted men, 87 Philippine Scouts, and 591 civilians. Of the entire number 1,611 were medical, 899 surgical cases. The total daily average number of patients in hospital was 96.25. Of this number 4.10 were officers, 70.89 American enlisted men, 6.10 Philippine Scouts, and 15.16 civilians.

The following table shows the movement of the sick, together with the principal causes of admissions, during the year 1915:

	Officers.	Enlisted men (American).	Philippine Scouts.	Civilians.
Admissions:				
For gunshot wounds.....		2		
Diarrhea and dysentery.....	3	10		11
Malarial fevers.....	6	17	8	14
Typhoid fever.....				2
Rheumatic affections.....		24	1	8
Venereal diseases.....	3	234	6	13
Injuries.....	6	134	9	55
Insanity.....	1	57	6	2
Alcoholism.....		49		3
All other causes.....	63	1,223	57	484
Total.....	82	1,750	87	591
Dispositions:				
Returned to duty.....	76	1,292	46	2
Discharged on certificate of disability.....		1	33	
Discharged per expiration of term of service.....		2	1	
Discharged per general court-martial.....		1		
Deaths (all causes).....		3	2	12
Transferred to other hospitals.....	11	465	1	13
Otherwise disposed of.....				566
Total.....	87	1,764	83	593

Total admissions during the year..... 2,510
 Remaining on sick report Dec. 31, 1914..... 97

Total to be accounted for..... 2,607

Total dispositions during the year..... 2,527
 Remaining on sick report Dec. 31, 1915..... 80

Total accounted for..... 2,607

The following tabulation shows the deaths, with causes, for the year 1915:

Cause.	Enlisted men (American).	Philippine Scouts.	Civilians.
Asphyxia during labor, due to inspiration of amniotic fluid.....			1
Broncho-pneumonia, acute.....			2
Cardiac dilatation.....			1
Ether anesthesia and operative shock.....			1
Exhaustion and hemorrhage from gums, due to spleno-myelogenous leukemia.....		1	
Gastroenteritis, acute, catarrhal.....			1
Hemorrhage from bowel, due to typhoid fever.....			1
Impetigo contagiosum.....			1
Obstruction of duodenum by constriction from ulcer.....		1	
Oedema of the brain, alcoholic.....			1
Premature birth.....			1
Rupture of saccular aneurysm of ascending arch of aorta.....	1		
Septicemia following acute suppurative ethmoiditis and empyemia of antrum of Highmore.....	1		
Shock and internal hemorrhage (abdominal) following traumatic injury.....			1
Toxæmia and exhaustion following pyæmia.....	1		
Toxæmia following carcinoma of liver.....			1
Total.....	3	2	12
Aggregate.....			17

American soldiers are not discharged for disability in the Philippine Islands except in very rare cases; there was one discharge there in 1915. All the native enlisted men physically disabled for service are discharged in the islands. The following table shows the number discharged, with causes therefor:

	American troops.	Philippine Scouts.
Per expiration of term of service.....	2	1
Certificate of disability.....	1	33
Per general court-martial.....	1	
Total.....	4	34

Causes of disability.

Aneurysm, saccular, transverse portion of arch of aorta.....	1
Ankylosis, right knee joint, sequel to gonorrheal arthritis.....	1
Bronchial asthma and pulmonary emphysema.....	1
Cataract, cortical, immature, right eye.....	1
Defective mental development.....	4
Dementia precox.....	4
Keratitis, chronic, affecting upper half of right cornea.....	1
Lateral curvature of spine, congenital.....	1
Leprosy.....	1
Neuritis, multiplo, chronic, involving upper and lower extremities.....	1
Tuberculosis, pulmonary, chronic.....	16
Tuberculosis, pulmonary, chronic, and tuberculosis of pleura.....	2
Total.....	34

In 1914 there were 41 discharged for disability at this hospital.

An active surgical clinic is maintained at this hospital. The following is a condensed tabular statement of surgical operations during the year 1915:

Operations.	Officers and enlisted men (American).	Philippine Scouts.	Total.	Civilians.	Grand total.
Cranium.....				1	1
Eye.....	11	1	22	11	22
Ear.....	14		14	4	18
Nose.....	28	1	29	3	32
Mouth and pharynx.....	30		30	30	60
Neck and thorax.....				1	1
Upper extremity.....	5		5	4	9
Abdomen (laparotomy).....	66	1	66	39	105
Rectum and anus.....	21		21	9	30
Genito-urinary system.....	18		18	4	22
Vascular system.....	3		3	4	7
Lymphatic glands.....	12		12	1	13
Lower extremity.....	6		6	4	10
Tumors.....	4		4	4	8
Gynecological:					
External.....				76	76
Internal.....				46	46
Total.....	224	2	226	240	470

Operations of eye and ear clinic are shown above to complete the table, although it is a separate service. There were 50 deliveries at term in the obstetrical ward with 4 stillbirths and 1 maternal death.

The following is a report of the hospital laboratory work done during the year:

Examinations of—	Examinations of—
Blood..... 4,969	Feces..... 2,823
Urine..... 3,871	Smears and cultures..... 1,885
Sputum..... 2,040	Water examinations, bacteriological..... 504
Pathological sections..... 82	Chemical, biological, and miscellaneous..... 312
Animal injections..... 46	
Wassermann reactions..... 4,535	

The mean strength of the personnel on duty at this hospital for the year was as follows: Medical officers, 10; dental surgeons, 2; Army Nurse Corps, 23.89.

DEPARTMENT HOSPITAL, HONOLULU, HAWAII.

This is the general hospital for the Hawaiian Department. It serves as a post hospital for the garrisons in the vicinity of Honolulu and receives from Schofield Barracks cases of a serious nature and those requiring special treatment.

During the year the hospital has been more than doubled in size and officers' ward and operating corps detachment have been additional buildings, a nurses' , are under course of construction considered as 300, which is by the use of the porches. has been converted into an birth delivery and sterilizing art one of the main wards

into three separate detention wards, one for the care of psychopathic cases, one for prisoners with contagious diseases, and one for prisoners with diseases that are not contagious. An interior telephone system of 30 instruments has been installed. The gas supply has been extended to all wards and departments, and cooking, sterilizing and water heating are now done by gas. Large store rooms have been completed for the storage and issue of all classes of property. Carpenter, plumbing, and paint shops have been built. An enlargement of the kitchen has been made. A hydrotherapeutic clinic has been established. An enlargement of the dining room and a further enlargement of the kitchen will become necessary when the full bed capacity of the hospital is made use of. In the basement of the isolation building a disinfecting chamber and rooms for infected clothing are needed. Refrigerating facilities are inadequate. Plans for a refrigerating and cold storage plant are in preparation. There are no quarters for medical officers at the hospital and but one set of noncommissioned officers' quarters. The acquisition of land is necessary for this purpose and is dependent upon congressional action.

The work in all departments of the hospital has increased during the year, especially in the work of the X ray, the surgical and gynecological service, and the laboratory. During the year 2,283 cases were admitted to hospital, of which number 34 were officers; 4 Army Nurse Corps; 1,965 enlisted men; 268 civilians, and 12 general prisoners. Of these cases 1,126 were medical, 732 surgical, 389 venereal, and 36 mental.

The daily average number of patients in hospital for the year was 111.67.

The following table shows the movement of sick, together with the principal sources of admissions, and the disposition of all cases during the year:

	Officers and en- listed men.	General prisoners.	Civilians.	Total.
Admissions:				
From command.....	81	.....	.....	81
Transfer.....	1,845	10	4	1,859
Otherwise.....	75	2	266	343
Remaining, 1914.....	75	.....	5	80
Total.....	2,076	12	275	2,363
Dispositions:				
Returned to duty.....	1,815	3	.....	1,818
Died.....	12	.....	8	20
Transferred to other hospitals.....	166	1	.....	167
Otherwise disposed of.....	4	8	248	260
Remaining, 1915.....	79	.....	19	98
Total.....	2,076	12	275	2,363

The principal causes of admission were as follows:

Gunshot wounds.....	8	Injuries.....	277
Diarrhea, gastroenteritis.....	66	Insanity.....	36
Malaria.....	8	Alcoholism.....	48
Typhoid.....	2	All others.....	1,402
Rheumatic affections.....	47		
Venereal.....	389	Total.....	2,283

Summary of clinical laboratory examinations of typhoid fever cases.

	Six months' periods ending—		
	June 30, 1915.	Dec. 31, 1915.	June 30, 1916.
Examination of typhoid cases.....	164	137	124
Convalescents examined:			
Positive.....	0	1	1
Negative.....	11	6	4
Suspected carriers or contacts examined:			
Positive.....	9	5	3
Negative.....	38	32	64
Widals:			
Positive.....	12	2	5
Negative.....	74	55	27
Blood cultures:			
Positive.....	2	4	1
Negative.....	22	28	29
Blood cultures from clots:			
Positive.....	0	0	0
Negative.....	4	6	2
Examination of feces for b. typhosus:			
Positive.....	0	0	0
Negative.....	24	14	60
Examination of urine for b. typhosus:			
Positive.....	0	0	0
Negative.....	12	28	59
Examination of feces for b. dysenteria:			
Positive.....	0	0	0
Negative.....	1	5	0

No chronic bacillus carriers were detected during the fiscal year ending June 30, 1916.

As there are only a few cases of paratyphoid fever reported yearly, it has not seemed necessary, at least in our service, to use a mixed typhoid and paratyphoid vaccine, and none has been used.

Summary of clinical laboratory examinations.

	Six months' period ending—		
	June 30, 1915.	Dec. 31, 1915.	June 30, 1916.
Blood counts:			
Red.....	92	74	63
White.....	94	70	66
Differential counts.....	98	70	72
Malaria:			
Positive.....	1	0	1
Negative.....	114	60	25
Blood cultures:			
Positive.....	0	1	2
Negative.....	4	3	2
Urinalyses.....	88	112	96
Sputa for tubercle bacilli:			
Positive.....	7	4	5
Negative.....	72	34	60
Feces for parasites, etc.....	36	16	19
Water, bacteriological.....	45	57	64
Cultures of pus, exudates, etc.....	96	56	75
Animal inoculations for immune sera, etc.....	299	240	311
Histological examinations of operative and post-mortem tissues.....	210	218	207
Miscellaneous examinations, gonococcus, etc.....	174	102	102
Wassermann examinations.....	5,567	2,047	2,519
Positive.....	240	266	315
Negative.....	510	442	527
Reexaminations.....	908	978	968
Tests made on survey.....	3,842	361	719
Examinations for treponema pallidum:			
Dark field microscope—			
Positive.....	6	4	3
Negative.....	28	8	2

LABORATORIES.

A laboratory is provided for each of the departments, the one at the Army Medical School, Washington, D. C., for the use of the Eastern Department; at Fort Leavenworth, Kans., for the Central Department; at the Letterman General Hospital, Presidio of San Francisco, Cal., for the Western Department; at Fort Sam Houston, Tex., for the Southern Department; and at Honolulu, Hawaii, for the Hawaiian Department. The laboratory of the tropical board has become a department laboratory for the Philippine Department, and located at Manila, P. I.

ARMY MEDICAL SCHOOL.

BACTERIOLOGICAL DIVISION.

No changes of importance have been made in the bacteriological laboratories during the past year. The work has been of a varied character, as shown in the following summaries:

TYPHOID FEVER PROPHYLACTIC.

Vaccine prepared in the laboratory was distributed during the six months' periods as follows:

	June 30, 1915.	Dec 31, 1915.	June 30, 1916.
Army.....	C. c. 107,823	C. c. 82,517	C. c. 340,596
Navy.....	48,528	50,374	84,585
National Guard.....	11,709	15,713	33,466
Various Government departments.....	1,152	2,280	1,148
Civilians and civilian institutions.....	1,082	761	536
Total.....	170,294	151,654	460,331

No changes have been made in the preparation of the typhoid vaccine, since our results from that at present in use have been all that could be desired.

Miscellaneous vaccines prepared and distributed to Army posts during the six months' periods.

	June 30, 1915.	Dec 31, 1915.	June 30, 1916.
Gonococcus:	C. c.	C. c.	C. c.
Prepared.....	1,700	3,280	2,750
Distributed.....	1,906	2,457	1,719
Staphylococcus:			
Prepared.....	280	325	422
Distributed.....	589	273	316
Streptococcus:			
Prepared.....	575	300	435
Distributed.....	383	152	300
Staphylococcus-acne:			
Prepared.....	383	875	300
Distributed.....	666	424	376
Autogenous, prepared and distributed.....number..	23	30	41
Bile media was distributed to Army posts.....bottles..		47	52

LETTERMAN GENERAL HOSPITAL.

Capt. Henry J. Nichols, Medical Corps, has been in charge of the laboratories for chemical and pathological work the greater part of the year, having assumed charge January 15, 1915, when an independent laboratory service was inaugurated. Capt. C. G. Snow, a valuable assistant, was transferred to the laboratory at Fort Bayard April 14, 1915. Sergt. Kincaid, who had been in the laboratory for seven years, was on February 11, 1915, relieved by Sergt. Higgins, who was replaced on August 5 by Sergt. Augsburg. The present force consists of one sergeant and 6 privates first class, and privates.

An addition to the laboratory has been authorized at a cost of about \$5,000 and has recently been occupied. This building, with some additional equipment, has made it possible to devote certain rooms to certain kinds of work, and it is believed that the increased efficiency thus gained will justify the expenditure. The old laboratory, consisting of two large rooms, was badly overcrowded. With the installation of gas, the laboratory will be thoroughly equipped for regular and special work.

The laboratories served as clinical laboratories for the hospital with its 3,195 admissions and as a department laboratory for the western department. The work covers parts of chemistry, bacteriology, parasitology, pathology, and serology and may be summarized as follows:

Urine examinations.....	4, 288	Wassermann reactions.....	3, 148
Sputum examinations for tubercle bacilli.....	1, 554	Skin reactions.....	387
Blood examinations.....	638	Throat cultures for diphtheria....	1, 196
Examination of venereal sores and discharges.....	313	Examinations of feces for parasites and ova.....	414
Cultures, miscellaneous.....	103	Smears, miscellaneous.....	75
Vaccinations and injections.....	361	Vaccines made.....	60
Functional tests (urine).....	13	Animal inoculations.....	103
Water examinations:		Typhoid examinations:	
Chemical.....	13	Blood.....	32
Bacteriological.....	85	Stool.....	10
Milk examinations:		Urine.....	6
Chemical.....	13	Agglutinations.....	13
Bacteriological.....	13	Stomach contents, routine.....	30
String tests and occult blood tests.	26	Stomach contents, toxicological...	2
Chemical examinations, flour, lemonade, candy, bread, tablet.....	5	Miscellaneous.....	20

Autopsies.—Under orders of the commanding officer, post-mortem examinations were made on all officers and enlisted men dying in the hospital, and permission was obtained for examination of most of other cases. Of the 73 deaths, 58, or about 80 per cent, have been followed by autopsies.

A parallel list of clinical and pathological diagnoses has been kept and the following lesions not clinically diagnosed have been found: Glioma of brain, hemorrhagic pachymeningitis, softening of the brain (2), tubercular abscess of apex of lung (2), one with extension into spinal canal and producing a transverse myelitis by pressure, empyema, pleural effusion (5), miliary tuberculosis, diaphragmatic hernia, pericarditis (5), atrophic cirrhosis of liver (2), gumma of pancreas, cancer of stomach, general peritonitis (5), appendicitis, cancer of prostate.

In general, about 75 per cent of clinical diagnoses were confirmed at autopsy.

Syphilis.—On October 5, 1915, a survey of most of the wards was made for the presence of syphilis, and of 215 patients, 47, or 21.9 per cent, were found to have syphilis; 12 per cent were in hospital for recognized syphilitic lesions and in 5.5 per cent syphilis was coincident, while in 3.5 per cent it had not been diagnosed and was found by Wassermann reaction.

Capt. Snow had developed a delicate technique for the Wassermann reaction, using different amounts of serum and a carefully controlled hemolytic system of goat cells. This system was used until Capt. Snow left for Fort Bayard, and then in the interest of uniformity with the other service laboratories the method devised by Capt. Craig at the Army Medical School was adopted and has been satisfactory. The use of the cholesterinized antigen has proved to be superior to the ordinary antigen in known cases, such as in primary cases and in cases of aneurysm, tabes, and paresis, and false positives have not been proved to occur. Spinal fluid examination has proved of great value in the diagnosis and prognosis of syphilitic conditions. Routine examinations have been made of all mental cases and should be made in all cases of syphilis before treatment is suspended. Twenty examinations have been made in the primary and secondary stages. No instance of involvement of the nervous system has been found in 6 primary cases, 5 early secondary cases showed no abnormalities, 6 showed slight changes, and 3 definite changes.

Eighteen intraspinal injections of salvarsanized serum have been given in 9 cases. Two cases of tabes have shown definite improvement, but none was seen in cases of paresis. Mercurialized serum was injected 13 times in 4 cases. These injections had some effect on the spinal fluid findings, but apparently less than salvarsanized serum. The intraspinal method is believed to be a rational and effective local treatment of syphilis of the nervous system. In the military service its use is apt to be limited, because while many patients can be improved they can not be returned to full duty, and are therefore discharged for disability. In selected cases, however, its use is indicated.

Under War Department orders requiring a Wassermann reaction on all accepted recruits, 1,106 specimens have been sent to this laboratory from Fort McDowell since July 23. The results of examination are as follows:

	XX	X	X—	—	Total.	XX
						<i>Per cent.</i>
Recruits.....	44	16	28	643	731	6.0
Reenlisted men.....	53	5	19	298	375	14.1
Total.....	97	21	47	941	1,106	.....
Per cent.....	8.7	1.8	4.2	85.0	.....	.....

It will be seen that in this set of examinations reenlisted men show more than twice as many cases of infections as recruits.

Capt. De Voe has checked up the (XX) cases clinically and has found a history of initial lesion or other evidence of probable infection in about 50 per cent of the positive cases.

Typhoid group.—No case of typhoid fever has occurred during the year. One case of paratyphoid A was diagnosed by blood culture, in a soldier who had antityphoid vaccination two years before.

The typhoid case record for the hospital for the last five years is as follows: 1911, 19; 1912, 2; 1913, 1; 1914, none; 1915, none. These results are undoubtedly due to compulsory antityphoid vaccination. Some writers on the subject have claimed that the freedom of the Army from typhoid was only apparent and that mild and atypical cases occurred which were not recognized. With this criticism in mind, blood cultures have been made on all cases of continued fever and at autopsies the condition of the ileum and gall bladder has been carefully examined, but no cases have been detected. The conclusion is that typhoid fever has not been present in the 3,195 persons admitted.

The descriptive lists of all military patients have been examined for record of antityphoid vaccination and 25 have been found apparently incomplete. On further examination 11 have been found to be really incomplete, and in 5 cases the necessary injections were given; in the other cases the patients were discharged for disability.

Diphtheria.—Diphtheria occurs annually during the winter months in San Francisco and usually spreads to the nearby garrisons. In December a few cases occurred in Company G, Twenty-fourth Infantry, and scattering cases elsewhere in the Presidio. Company G was isolated and examined; 5 cases and 25 carriers were found, or 19 per cent of carriers. This figure has been maintained for the other contacts examined.

The Schick test has been made on 12 nurses, and 4 were found immune. One untested nurse in charge of diphtheria patients became infected. Thirty-seven medical officers and Hospital Corps men were tested and 17 found immune. A number of tests have been made on cases and contacts and carriers in children and adults and the same general results have been obtained as have been reported in the literature of this subject. From the military point of view the test seems to be of value in detecting those who are naturally immune before an epidemic appears. A list of immunes can be kept among doctors, nurses, and corps men, and details for care of patients can be made from this list. The drawbacks to the test are, the difficulty of securing good toxin at remote places, the poor keeping qualities of the toxin, the difficulty of reading partial reactions, and the necessity of observation for several days before a final reading is made. In the presence of an epidemic these are disturbing factors, but during intervals they could be obviated.

Amœbic dysentery.—This disease presents a distinct problem in treatment at this hospital because nearly 50 cases have been admitted and there is no concensus of opinion as to the best treatment. Emetine is of great value, clinically, but practically 100 per cent of cases relapse under emetine alone. With the cooperation of the medical service, patients in one ward have been treated with emetine and ipecac by mouth, in another ward a series has been started on emetine and bismuth with quinine irrigations. None of the first set are free from amœba, but several of the second series have been free for several months.

Two cases of bacillary dysentery were admitted from a transport. A dysentery bacillus was isolated from the stool, but has not yet been fully identified.

Amount of work and needs.—The work done exceeds that of the previous year by about 33 per cent. An analysis shows that over 80 per cent of the examinations gave negative results, and this emphasizes the large amount of work that must be done in a laboratory in order to arrive at the small percentage of positive results. Nearly all advances in clinical medicine have a laboratory element, and the demands on the laboratory are constant and increasing. This point is made in order to state that the number of men required for the proper laboratory work of this hospital will increase, and that if any amount of special work is to be done—and it should be done—another medical officer should be detailed.

At present, in equipment, the greatest need is gas, without which makeshifts will continue to be necessary.

In personnel there is a distinct need for men with some training in chemical and clinical laboratory work, and it seems that the Army Medical School might serve as a school for enlisted men as well as for officers along the line of the other service schools. At present the finding of trained men, or of men capable of training, is more or less a matter of chance.

Special work.—Ten specimens from autopsies have been sent to the Army Medical Museum and four specimens and cultures have been sent to the Army Medical School.

One lecture on syphilis was given at the Stanford Medical School, two papers on antityphoid vaccination and two on tropical medicine have been read at medical meetings. Three of these papers have been published.

Some work on gall-bladder infections in the rabbit with typhoid, paratyphoid, and dysentery bacilli, as bearing on the carrier problem, is under way, thanks to a special appropriation from the Surgeon General's Office, for animals.

Seventeen cases have been examined for the presence or cure of syphilis by the Wassermann provocative Wassermann, luetin and spinal fluid tests. All tests were negative in 7 cases and one or more tests were positive in 10 cases.

FORT SAM HOUSTON, TEX.

The department laboratory has served practically one-half of the mobile army during the whole period and complied with requests for almost 13,000 laboratory examinations and operations and filled 398 requisitions for supplies of various kinds.

A summary of these activities follows.

Miscellaneous vaccine prepared and distributed during the year 1915.

	Cubic centimeters.		Cubic centimeters.
Staphylococcus:		Pyocyaneus:	
Prepared.....	358	Prepared.....	120
Distributed.....	288	Distributed.....	96
Streptococcus:		Pneumococcus:	
Prepared.....	319	Prepared.....	54
Distributed.....	276	Distributed.....	42
Staphylococcus-streptococcus:		Paratyphoid A:	
Prepared.....	261	Prepared.....	125
Distributed.....	206	Distributed.....	36
Staphylococcus - streptococcus - pyocyaneus:		Paratyphoid B:	
Prepared.....	105	Prepared.....	88
Distributed.....	96	Distributed.....	12
Staphylococcus-acne:		Melitensis:	
Prepared.....	27	Prepared.....	69
Distributed.....	18	Distributed.....	60
Pyorrhea, mixed:		Autogenous, miscellaneous.....	2, 248
Prepared.....	66	Lots of vaccines prepared.....	49
Distributed.....	54		

VACCINES.

The great variety of infections usually met with in military practice have been extensively treated by suitable vaccines and the prompt and favorable results obtained fully justify the following conclusions:

The use of properly selected vaccines—

1. Markedly reduced the intensity and period of suffering on the part of the patient; and

2. Reduces to a minimum (a) time lost from duty, (b) period of hospital care and treatment, (c) the direct expenditure for medicines and dressings.

Summary of clinical laboratory examinations of typhoid and paratyphoid fever cases.

Cases examined for typhoid fever....	36	Agglutinations for paratyphoid B:	
Widals:		Positive.....	1
Positive (2 soldiers and 1 civilian)	3	Negative.....	0
Negative.....	0	Examination of feces for B. dysenteria:	
Blood cultures:		Positive.....	1
Positive.....	14	Negative.....	6
Negative.....	25	Agglutinations for B. dysenteria:	
Examination of feces for B. typhosus:		Positive.....	1
Positive.....	3	Negative.....	6
Negative.....	13		
Examination of urine for B. typhosus:			
Positive.....	1		
Negative.....	11		

TYPHOID AND PARATYPHOID FEVERS.

Typhoid fever appeared for the first time since the concentration of troops (amounting to 45 per cent of the mobile army of the United States) in the Southern Department, in the persons of two soldiers belonging to organizations attached to small units. In one case no previous history was obtained but in the other the soldier passed

¹Two cultures from one case.

most of his time in the home of a civilian living adjacent to the camp. A member of this family was ill and this laboratory found *B. typhosus* in specimens submitted from this patient prior to the receipt of specimens from the soldier. The etiological organism was isolated from blood cultures and feces in the three cases (one civilian), the urine in one case, and positive widals were obtained in the three cases.

A comparison of the incidence of typhoid fever in large, semipermanent camps similar to those of 1898 as made below confirms the fact that since the introduction of typhoid prophylaxis in the Army the typhoid rate in such camps has progressively diminished, a fact that is not affected by the two cases here reported, these having occurred in small, isolated and widely separated units.

	Cases of typhoid.		Deaths.	
	Certain.	Certain and probable.	Typhoid.	All causes.
1898—Camp at Jacksonville, Fla. (troops, 10,759).....	1,729	2,693	248	281
1911—Camp at San Antonio, Tex. (troops, 12,801).....	1			11
Feb. 26, 1913, to Aug. 31, 1915—Camp at Texas City and Galveston, Tex. (troops, 11,500).....				(?)

No report.

B. paratyphosus B was isolated from the purulent exudate from the glands of a soldier suffering from a multiple lymph-adenitis, which was clinically diagnosed as Hodgkin's disease. The soldier gave no history of previous illness resembling typhoid fever, and the condition for which he appeared on sick report was not one of the sequelæ of such infection.

Clinical laboratory examinations of Mediterranean fever cases.

Number of cases examined for Mediterranean fever.....	34
Positive.....	17
Negative.....	17

MEDITERRANEAN (MALTA) FEVER.

The presence of Mediterranean fever in the Southern Department is worthy of serious attention. Out of 34 examinations made for this disease 50 per cent were found positive, 16 being cases of civilians connected with the goat-raising industry, and the other one an Army officer who gave a history of having eaten "barbecued" goat meat but denied having used goat's milk in any form or having served in the vicinity of goat herds. One of the cases of civilians proved fatal.

Summary of clinical laboratory operations.

Blood counts.....	761
Red.....	197
White.....	564
Differential counts.....	325
Hemoglobin estimated.....	215
Malaria.....	395
Positive.....	35
Negative.....	360

Urine analyses, total.....	2, 178
Positive for albumen, no casts.....	335
Positive for casts, no albumen.....	412
Positive for casts and albumen.....	167
Negative for albumen and casts.....	1, 264
Sputa for tubercle bacilli.....	685
Positive.....	73
Negative.....	612
Feces for parasites, etc.....	337
Water.....	19
Bacteriological.....	15
Chemical.....	4
Cultures from pus, exudates, etc.....	80
Animal inoculations.....	255
Histological examinations of operative and post-mortem tissues.....	107
Urethra smears for gonococci.....	315
Positive.....	140
Negative.....	175
Wassermann reactions.....	6, 504
Blood serum—	
Positive.....	851
Negative.....	2, 785
Reexaminations.....	2, 714
Spinal fluid—	
Positive.....	14
Negative.....	124
Reexaminations.....	16
Examinations for treponema pallidum, dark field microscope.....	146
Positive.....	32
Negative.....	114
Luetin tests.....	22
Spinal fluid.....	136
For noguchi butyric acid test.....	55
Lange's colloid gold test.....	25
Pleocyte counts.....	56
Rabies.....	3
Positive for negri bodies.....	2
Negative for negri bodies.....	1
Milk.....	99
Mother's milk.....	8
Cow's milk.....	91
Diphtheria.....	97
Positive.....	20
Negative.....	77
Stomach contents.....	23
Malt beverages.....	17
Antigens prepared.....	14
Autogenous serum treatment for psoriasis.....	5
Miscellaneous examinations.....	36
Autopsies performed.....	12
Slides added to cabinet.....	330

MILK EXAMINATION.

The method of making milk examinations that has been in use in this laboratory for the past three months has been found satisfactory, and monthly submission of sample from the dairies supplying Fort Sam Houston, Tex., Fort Bliss, Tex., and Camp Douglas, Ariz., has been directed by the commanding general of the department.

This method furnishes information as to (a) bacterial content, (b) leucocyte count, (c) presence of certain known disease-producing bacteria, (d) the presence of some preservatives, (e) the percentage of fat, and (f) the specific gravity and presence or absence of added water.

These results can be determined from a sample of milk small enough to be easily shipped by mail after preparation by the post surgeons and furnish them with accurate data upon which report can be made as to the quality of the milk supply as required by A. R. 1387.

Supplies furnished to posts in the Southern Department, in addition to those furnished the base hospital, Fort Sam Houston, Tex.

Secured on requisition:			
Gonococcus vaccine.....	cubic centimeters..	640	
Typhoid prophylactic.....	do.....	5,040	
Smallpox vaccine.....	units..	10,390	
Mailing tubes.....		1,280	
Specimen bottles.....		98	
Prepared in laboratory:			
Autogenous vaccines.....	cubic centimeters..	578	
Wright's capsules.....		6,182	
Loeffler's blood serum.....	tubes..	236	
Agar agar, etc.....	do.....	96	
Miscellaneous, stains, etc.....	requisitions..	22	
Bile media.....	bottles..	86	
Blank requisitions supplied to avoid delay.....		30	
Total number of requisitions filled during the year.....		398	

The Wassermann reaction—Table of results in cases of known syphilis.

Blood serum.	Cases.	Positive.	Negative.	Per cent positive.
Primary.....	100	71	29	71.00
Secondary.....	667	516	151	77.36
Tertiary.....	212	155	57	73.11
Latent.....	328	107	221	32.62
Hereditary.....	2	.....	2	.....
Total.....	1,309	849	360	64.86

Spinal fluid.	Cases.	Positive.	Negative.	Per cent positive.
Primary.....	8	.....	8	.....
Secondary.....	11	1	10	9.1
Tertiary.....	31	9	22	29.03
Latent.....	18	4	14	22.22
Hereditary.....	.....	.....	.....	.....
Total.....	68	14	54	20.6

Spinal fluid reaction positive with positive serum.....	6
Spinal fluid reaction positive with negative serum.....	3
Spinal fluid reaction negative with positive serum.....	14

Miscellaneous information gained from Wassermann tests.

	Cases.	Positive.	Negative.	Per cent positive.
Applicants for enlistment.....	123	13	110	10.5
Applicants for United States Military Academy.....	5	.....	5	.....

Excluded from the above figures:

False inhibitions.....	42
Cases of malaria.....	5

Comparative table of results of the Wassermann reaction with relation to treatment (cases of known syphilis).¹

	Positive.		Negative: no record of treatment.		Negative; treated prior to test with record of previous positive reaction.		Negative; treated prior to test with no record of previous positive reaction.	
	Cases.	Per cent.	Cases.	Per cent.	Cases.	Per cent.	Cases.	Per cent.
Primary.....	71	71.00	17	17.00	5	5.00	7	7.00
Secondary.....	513	77.43	21	3.14	67	10.01	63	9.43
Tertiary.....	155	73.11	8	3.77	20	9.44	29	13.68
Latent.....	107	32.62	1	.31	144	43.90	76	23.17
Hereditary.....			2	100.00				
Total.....	351	64.91	49	3.74	236	18.00	175	13.35

¹ Classification made on clinical data accompanying requests for the tests.

Particular attention is paid to the Wassermann test, and it is believed that the results are satisfactory.

CLINOSTOMUM MARGINATUM.

Specimens of this fluke were found in fresh-water bass caught at Medina Dam in the vicinity of San Antonio, Tex.

This is mainly interesting because of its economic importance and the fact that hitherto it has not been reported as existing so far south, the previously known distribution being from Kansas City and St. Paul on the west to Montreal on the east, and St. Paul on the north to Philadelphia on the south. This parasite is not known to be injurious to the human system, but does render the edible portion of food and game fishes unfit for consumption.

HONOLULU, HAWAII.

The department laboratory, Hawaiian Department, was established in June, 1914. It is a part of the department hospital and takes care of all routine laboratory work of the hospital and Fort Shafter, as well as the more specialized work for other posts in the department. The work is at present done in one small room in the administration building. Examinations of urine and feces and the preparation of vaccines are carried on side by side, which constitutes a condition far from ideal. These conditions must be tolerated pending the completion of the new clinic building, which will contain for the laboratory a large room extending entirely across one floor, with a smaller room for the office and records.

The equipment added recently includes a large electric centrifuge, new incubator, and dark-field substage with arc lamp. The last has proven invaluable for the quick, easy diagnosis of chancres and mucous patches. Additional equipment will be added when there is a place to put it.

The personnel in charge of this work consisted of Capt. Frederick H. Foucar and two privates, which can not make for a further increase in the volume of work put out. It is contemplated, with additional quarters, to add a noncommissioned officer to the personnel, to care for the records and handle a great deal of the routine work.

Summary of clinical laboratory examinations.

Urines.....	2, 877	Blood cultures.....	20
Blood counts.....	619	Animal inoculations.....	9
Sputa.....	342	Dark-field examinations.....	85
Feces.....	389	Alcohol determinations.....	6
Urethral smears.....	347	Medico legal tests.....	0
Milk-fat estimations.....	57	Malaria hunts.....	71
Milk-bacteria estimations.....	40	Autogenous vaccines.....	96
Throat cultures.....	156	Autopsies.....	16
Throat smears.....	54	Tuberculin reactions.....	9
Stomach contents.....	163	Phenolphthalein.....	22
Bacterial examinations.....	200	Chemical tests.....	18
Wassermanns.....	2, 967	Spinal fluid (butyric acid).....	18
Water bacterial.....	67	Serum agglutinations.....	115
Chemical examinations, water....	25		
Tissue sectioning.....	27	Total.....	8, 815

The officer in charge furnishes the following as the most interesting data to be observed on looking over the above table:

Two outbreaks of diphtheria—June, 1914, and November and December, 1915.

An outbreak of dysentery (bacillary) occurred in September-October, 1915—about 40 cases among soldiers; 2 fatal cases (both children.) Organism isolated was of the Hiss-Russell type; a vaccine prepared, and 50 children of Fort Shafter were inoculated (3 doses); there were no additional cases among the children isolated.

A Wassermann survey was started on the Twenty-fifth Infantry at Schofield Barracks, but was discontinued after 500 specimens had been turned in; 8½ per cent were double plus; it has been found very valuable to have record of these positive Wassermanns, for in several instances it has materially hastened arriving at a diagnosis in these men when subsequently admitted to the department hospital for treatment. It would be ideal if such a Wassermann record—containing, as it does, history of all venereal infection—could be had, kept up to date, from time to time for all men of the command.

The technique of the Wassermann is identical with that of the Army Medical School, with the exception that a liquid amboceptor is employed, for it is thought that it keeps better in this climate, is quicker and more accurate in titrating. By means of the dark field, in the past 12 months 40 primary lesions have been diagnosed—many before onset of a positive Wassermann.

In routine examination of urine the frequency of a dietetic glycosuria is noted.

Examination of stools revealed numbers of cases of amoebic dysentery and hookworm—all these cases contracted in States, though these conditions do exist among the natives. The cases of malaria were all in men newly arrived from the States and giving definite history of previous attacks.

An outbreak of typhoid fever at Schofield Barracks starting in November, 1915—first case that of a Japanese servant—four cases (with positive blood cultures) among soldiers; several other cases occurring among servants and children.

Two sharp outbreaks of food poisoning, both involving almost an entire company. First at Schofield Barracks, and due to absorption of toxins produced in meat by the *B. paratyphoid* B; abrupt onset, short course and lack of agglutination on part of patients ruling out diagnosis of paratyphoid fever. Second, a company at Shafter, due to eating a mess containing poisonous fish.

MEDICAL DEPARTMENT.

The following statement shows the strength of the personnel commissioned, enlisted, and employed by contract or otherwise, of the Medical Department on June 30, 1916:

Medical officers.....	443
Medical reserve officers, active duty.....	146
Contract surgeons.....	17
Dental surgeons, commissioned.....	40
Acting dental surgeons, under contract.....	35
Army Nurse Corps.....	150
Medical Department enlisted personnel	4, 670
Civil employees.....	291
<hr/>	
Total medical personnel.....	5, 792

MEDICAL CORPS.

The Medical Corps is composed of the commissioned medical officers of the Regular Army:

Authorized strength June 30, 1916.....	444
<hr/>	
In service June 30, 1915.....	433
Appointed during the year.....	14
<hr/>	
Total.....	447
Losses during the year.....	4
<hr/>	
In service June 30, 1916.....	443

On October 1, 1915, 20 candidates who had passed the preliminary examination for appointment in the Medical Corps reported at Washington to take the course of instruction at the Army Medical School. Seventeen successfully completed the course of instruction at the school and were graduated June 1, 1916. Fourteen graduates were recommended for appointment in the Medical Corps of the Army.

Losses during the fiscal year.

	Colonel.	Captain.	First Lieutenant.	Total.
Died.....	1	1	.....	2
Retired.....	1	.....	.....	1
Resigned.....	.....	.....	1	1
<hr/>				
Aggregate.....	2	1	1	4

The following promotions were made: 2 lieutenant colonels to be colonels; 2 majors to be lieutenant colonels; 2 captains to be majors; 22 lieutenants to be captains.

The department held two preliminary examinations for appointment in the corps, the first on July 12, 1915, and the second on January 10, 1916, at various Army posts throughout the country. Nineteen applicants passed the preliminary examinations. Of this number 12 attended the session of the Army Medical School, which

ended June 1, 1916, leaving 7 who will attend the next session of the school. Preliminary examinations will be held on July 17, 1916, August 14, 1916, and September 5, 1916, at various Army posts throughout the United States, Panama, and Porto Rico, to which over 200 candidates have been invited.

MEDICAL RESERVE CORPS.

On roster June 30, 1915.....	1,426
Appointed during the year.....	542
	<hr/> 1,968

Losses during the year:

Resigned.....	34
Discharged.....	6
Died.....	11
Commissions vacated by appointment to regular corps.....	14
	<hr/> 65

On roster June 30, 1916.....	1,903
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Of the 1,903 on roster June 30, 1916, 146 were on active duty and 1,757 on the inactive list.

On active list June 30, 1915.....	86
Ordered to active duty during the year.....	136
	<hr/> 222

Relieved from active duty.....	62
Commissions vacated.....	14
	<hr/> 76

On active duty June 30, 1916.....	146
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An officer of the Medical Reserve Corps residing in the vicinity of each military post has been designated as a locum tenens, and the policy has been adopted of calling such officer into actual service for duty at his post when all the regular medical officers thereat are called upon to accompany troops into the field.

CONTRACT SURGEONS.

In service June 30, 1915.....	14
Contracts made during the year.....	11
	<hr/> 25

Total.....	25
Contracts annulled during the year.....	8
	<hr/> 17

Contracts in force June 30, 1916.....	17
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These contract surgeons are on duty at arsenals, remount depots, transports, etc., at the rate of pay ranging from \$75 to \$150 per month.

DENTAL CORPS.

Dental surgeons:

Number of dental surgeons in service June 30, 1915.....	34
Appointed during the year.....	7
	<hr/> 41

Resigned during the year.....	1
	<hr/> 40

On duty June 30, 1916.....	40
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Acting dental surgeons:

Number of acting dental surgeons in service June 30, 1915.....	35
Appointed during the year.....	15
	<hr/> 50

Acting dental surgeons—Continued.

Contracts annulled.....	8
	<u>42</u>
Contracts annulled by acceptance of commission as first lieutenant, dental surgeon.....	7
	<u>35</u>
On duty June 30, 1916.....	35
Total.....	<u>75</u>

One examination of applicants for appointment as acting dental surgeon, United States Army, was held during the year, on October 18, 1915. At this examination 10 were successful; the 10, with 5 who had passed a previous examination, were given contracts.

Under the act of March 3, 1911, acting dental surgeons who have served three years in a satisfactory manner become eligible for appointment as dental surgeons and after passing the prescribed examination are eligible for commission in the Dental Corps with the rank of first lieutenant, provided the total number of dental surgeons of that rank did not exceed 60.

During the year 10 acting dental surgeons, having served 3 years, became eligible for such promotion; of these, 7 passed the required examination and have been promoted.

ENLISTED FORCE OF THE MEDICAL DEPARTMENT.

Strength at date of last report, June 30, 1915:

Sergeants first class.....	299
Sergeants.....	408
Corporals.....	42
Acting cooks.....	187
Privates first class and privates.....	3,057
Total.....	<u>3,993</u>

Gain, July 1, 1915, to June 30, 1916:

By enlistment.....	586
By transfer from line, including unassigned recruits from depots.....	1,419
By return from desertion.....	153
General prisoners restored to duty.....	6
Total.....	<u>2,164</u>

Loss during same period:

By discharge—	
Expiration of term of service.....	272
By order.....	398
Certificate of disability.....	49
Sentence general court-martial.....	165
Transfer to reserve.....	201
Transfer to line.....	102
By retirement.....	29
By death—	
Due to disease.....	16
Drowned.....	1
Suicide.....	1
By desertion.....	251
Dropped.....	2
Total.....	<u>1,487</u>

Leaving in service June 30, 1916:

Sergeants first class.....	334
Sergeants.....	524
Corporals.....	40
Cooks.....	199
Privates first class and privates.....	3,573
Total.....	<u>4,670</u>

The enlisted personnel of the Medical Department was also reorganized. The designation Hospital Corps was changed to Medical Department (enlisted force). Two new grades above sergeant, first class, were established: Master hospital sergeant, with pay of \$75 per month, and hospital sergeant, with pay of \$65 per month. The pay of sergeants was made to compare to that of the similar grade in other staff corps, \$36 per month.

The percentage basis was adopted for the Medical Department, 5 per cent of the enlisted strength of the Army being allowed: in time of actual or threatened hostilities the Secretary of War is authorized to cause to be enlisted such additional number of men as the needs of the service may require.

Following are the grades as now established: Master hospital sergeants, hospital sergeants, sergeants first class, sergeants, corporals, cooks, horseshoers, saddlers, farriers, mechanics, privates first class, privates.

Ratio of privates first class to privates is now the same as in the Quartermaster Corps.

Ratings for additional pay for privates first class were established as follows: Dispensary assistant, \$2 a month; nurse, \$3 a month; surgical assistant, \$5 a month.

ARMY NURSE CORPS.

The authorized strength for the Army Nurse Corps for the fiscal year ending June 30, 1916, has been 150, which, however, has been far from sufficient to supply the demand for nurses. Two nurses from the eligible list have been employed under contract since April 28, at the Walter Reed General Hospital, Takoma Park, D. C., owing to the increased work at this station. The appointment of 12 additional nurses was authorized on June 9 by the Secretary of War, and in consequence 12 nurses were assigned to duty at the base hospital, Fort Bliss, Tex. Eight more have been ordered to the base hospital, Fort Sam Houston, Tex. Additional nurses will be sent to both these hospitals as soon as provision is made for an increase in the Nurse Corps. Four nurses who have been on duty at Fort Leavenworth have been transferred from there, on account of the transfer of the troops to the Mexican border.

New quarters for nurses have been furnished and are occupied at the department hospital, Honolulu, and the quarters at Letterman General Hospital will be ready for occupancy in August. Plans are being drawn also for nurses' quarters at Fort Sam Houston, the nurses in the meantime occupying rented quarters at the post as a temporary arrangement.

Seven hundred and fifty requests for application blanks have been received during the year. During the same period there have been 34 discharges and 1 death; 40 appointments and 7 reappointments; total, 47.

The appropriation bill for the coming fiscal year now before Congress provides for 56 additional nurses, but on account of the recent mobilization on the Texan border of the militia, in addition to the regular troops, a further increase will be required.

ARMY MEDICAL SCHOOL.

Col. William H. Arthur, Medical Corps, relieved Col. Charles Richard, Medical Corps, on September 30, 1915, as commandant of the school and professor of military surgery.

Maj. Eugene R. Whitmore, Medical Corps, assumed the duties of professor of military medicine and tropical medicine on August 4, 1915, relieving Lieut. Col. Champe C. McCulloch, jr., Medical Corps. In taking up this duty Maj. Whitmore did not relinquish his professorship in bacteriology, pathology, and laboratory diagnosis.

Capt. Ralph H. Goldthwaite, Medical Corps, relieved Capt. Edward M. Talbott, Medical Corps, as assistant professor of ophthalmology on November 3, 1915.

Capt. Paul L. Freeman, Medical Corps, reported on January 26, 1916, for a special course of instruction, relieving Capt. Thomas D. Woodson, Medical Corps.

The twentieth session of the school began on October 1, 1915, and ended May 20, 1916.

The number of accepted candidates appointed in the Medical Reserve Corps and ordered to the school was 20. Of this number, one failed to report, one resigned after reporting and before commencing the course, and one was later relieved from attendance by reason of physical disability.

Two members of the Medical Corps of the Organized Militia, one from the Georgia National Guard and one from the Pennsylvania National Guard, were admitted to the school. Both of these officers finished the course for medical officers of the Organized Militia and were found proficient. Certificates of proficiency were issued to them.

The post-graduate course for officers of the Medical Corps was inaugurated and six officers (Capt. Charles L. Foster, Joseph F. Siler, Craig R. Snyder, Lucius L. Hopwood, Lee R. Dunbar, and William S. Shields) were ordered to and reported at the school. This course was very successful and of great advantage to the officers taking it, though it was curtailed by the exigencies of the service.

Of the 17 student candidates under instruction at the school, 16 qualified at the final examination. Of this number 15 were recommended for commission in the Medical Corps, one failing to receive such recommendation because of deficiency in aptitude for the military service.

The following table exhibits the course of instruction, the names of the professors and assistant professors, the value given to each subject, and the hours of instruction:

No.	Subject.	Hours of instruction.	Professor.	Value.	
				Maximum.	Minimum.
1	Military surgery.....	26	Col. Wm. A. Arthur.....	800	640
2	Medical Department administration.....	26	Lieut. Col. J. D. Glennan.....	800	640
3	Military medicine and tropical medicine.....	36½	Lieut. Col. C. C. McCulloch and Maj. E. R. Whitmore.	800	640
4	Ophthalmology.....	76½	Maj. T. C. Lyster, professor, and Capt. R. H. Goldthwaite, assistant professor.	400	320
5	Military hygiene.....	22	Maj. W. J. L. Lyster.....	800	640
6	Bacteriology, pathology, and laboratory diagnosis.....	276	Maj. E. R. Whitmore, professor; Capt. Edw. B. Vedder and M. A. Reasoner, assistants.	900	720
7	Sanitary chemistry.....	150	Maj. R. B. Miller.....	600	400
8	Sanitary tactics.....	76	Capt. P. L. Jones.....	500	400
9	Operative surgery.....	8	Capt. Arthur C. Christie.....	400	320
10	Röntgenology.....	19	.....do.....	300	240

In addition to the above the following instruction was given: Series of lectures on psychiatry, general paralysis of the insane, mental defectives, psychosis occurring in mental defectives, dementia precox, hebephrenic type, paranoia; manic-depressive psychosis; psycho-analytical methods; hysteria and psycho-neuroses, by First Lieut. William A. White, M. R. C., superintendent of the Government Hospital for the Insane, special professor. In addition to these lectures there were clinical demonstrations by Capts. Thomas D. Woodson and Paul L. Freeman, Medical Corps, as follows: Dementia precox, general paralysis of the insane, manic-depressive psychosis, paranoid state, paranoid dementia precox, involutional melancholia, senile dementia, paresis, progressive muscular atrophy, paranoia, malingering in old dementia precox, juvenile paresis, and mental defectives. Twenty-four hours were devoted to the general subject.

Thirty hours instruction in equitation by First Lieuts. Sloan Doak and David H. Scott, Fifth United States Cavalry.

Twelve lectures on military law by Maj. Walter A. Bethel, Judge Advocate General's Department.

No special professors were designated during the 1915-16 session.

Two sergeants, Hospital Corps, were detailed at the school for instruction in X-ray work and photography; they both proved to be apt, and acquired the technical knowledge and skill necessary to qualify them as instructors in these subjects, and were given certificates of proficiency.

The closing exercises were of an informal character. The diplomas were presented to the graduates by the Surgeon General of the Army with a few appropriate remarks. The two medals—the Hoff memorial medal and the Sternberg medal—which were awarded to First Lieuts. Edward A. Noyes and Paul A. Schule, respectively, were not presented during the exercises, there not being sufficient time between the final examinations and the date of graduation in which to have them properly engraved.

All the officers assigned to duty at the school have performed their various duties in a most satisfactory manner.

The enlisted personnel has also shown itself to be satisfactory in every respect. There has been no infraction of discipline among the men of the detachment.

The commandant, in closing his report, remarks that—

The clerical force has performed its duties efficiently and satisfactorily.

In view of the fact that the request for an appropriation for the building of an Army Medical School has been disapproved, and that the present building is too small for the enlarged classes that may be expected in the future, and generally very poorly adapted to the needs of the school, it has been recommended that another building be occupied for the purpose, and one has been selected at No. 604 Louisiana Avenue, which, while it increases the expenses very little, will give more than twice the space of the present building.

It seems to me that too much time is given up to laboratory work in the school and not enough attention paid to sanitary tactics. I therefore recommend that in the future the students be required to spend at least two weeks in camp. A camp could be established on the grounds of the Walter Reed General Hospital, and two, or preferably three, well qualified medical officers selected to give the students some field training. While the laboratory work is very important, it is not strictly military, and the students have no opportunity of learning to care for themselves in camp, the details of camp sanitation, and the general duties of medical officers in the field.

If it is practicable, it is considered that the post-graduate course for medical officers be repeated during the next session of the school for at least six officers of the corps if they can be spared for the purpose. Some of these officers might incidentally be utilized as instructors in the students' camp, if my recommendation for its institution is carried out and the necessary equipment for such a camp can be supplied from the Quartermaster Corps.

SPECIAL WORK BY MEDICAL OFFICERS.

BULLETINS.

In the sundry civil bill for 1916, under the appropriation for printing and binding for the War Department, it was provided:

That the sum of \$3,000, or so much thereof as may be necessary, may be used for the publication from time to time of bulletins under the direction of the Surgeon General of the Army for the instruction of medical officers when approved by the Secretary of War.

Under the authority mentioned above, two bulletins were issued during the year, viz:

BULLETIN No. 9. Gunshot roentgenograms, a collection of roentgenograms taken in Constantinople during the Turko-Balkan War, 1912-13, illustrating some gunshot wounds in the Turkish Army, by Maj. Clyde S. Ford, Medical Corps.

BULLETIN No. 10. Officers of the Medical Reserve Corps, United States Army, inactive list, with post-office addresses of each, compiled under the direction of the Surgeon General.

Material is now on hand for three bulletins, which will probably be issued some time during the fiscal year 1917.

ARTICLES BY MEDICAL OFFICERS.

NOTE.—It is desired to include in this list all articles written by medical officers during the fiscal year. It is therefore requested that the title and place of publication of articles written by medical officers be sent to the office of the Surgeon General.

Articles by medical officers of the Army, July 1, 1915, to June 30, 1916.

Author.	Article.	Disposition.
Arthur, Col. William H.....	Postgraduate instruction at the Army Medical School.	Military Surgeon, February, 1916.
Ashford, Maj. Bailey K.....	The dietetic treatment of sprue.....	Read by title before American Society of Tropical Medicine, San Francisco, Cal., July 14-16, 1915. American Journal of Tropical Diseases and Preventive Medicine, January, 1916.
Do.....	Surgery related to odontology.....	Revista Dental, Habana, Cuba, December, 1915.
Do.....	Further experimentation in animals with a monilia commonly found in sprue.	American Journal of Medical Sciences, April, 1916.
Do.....	Tropical diseases.....	Chapter for fourth volume of Musser and Kelly's Practical Treatment, 1916.
Ashford, Capt. Mahlon.....	A proposed motor-ambulance company.	Military Surgeon, October, 1916
Do.....	The American doctor and military preparedness.	Awaiting publication.
Barber, Capt. John R.....	Sanitary problems of prison and concentration camps.	Read before Southwest Medical and Surgical Association, El Paso, Tex., Dec. 9-11, 1915; awaiting publication.
Birmingham, Col. Henry P..	Coordination of the Medical Departments of the Army and Navy in campaign.	Military Surgeon, April, 1916.
Bispham, Maj. William N..	A review of the sanitary service in the present war.	Awaiting publication.
Chamberlain, Maj. Weston P.	Demography in so far as it relates to the vital statistics of armies.	Do.
Christie, Capt. Arthur C....	A motor ambulance for field service.	Do.

Articles by medical officers of the Army, July 1, 1915, to June 30, 1916—Continued.

Author.	Article.	Disposition.
Cole, Capt. Clarence L.....	Report of a case of infection of lymph glands with <i>Bacillus Paratyphosus B.</i>	Journal of Infectious Diseases, April, 1916.
Connor, Capt. Clarence H...	The special physical examination of aviators for the United States Army.	Awaiting publication.
Cooper, Capt. Alexander T..	The Wassermann reaction and its relation to tuberculosis. (Collaborated with Capt. C. G. Snow.)	American Journal of the Medical Sciences, August, 1916.
Coulter, Capt. John S.....	Study of pathology of gall bladder and biliary passages in cholera.	Philippine Journal of Science, Manila, November, 1915.
Craig, Capt. Charles F.....	Observations upon complement fixation in the diagnosis of pulmonary tuberculosis.	Journal of Medical Sciences, December, 1915.
Do.....	Observations upon the endamoebæ of the mouth: I. <i>Endamoebæ givalis</i> (buccalis).	Journal of Infectious Diseases, February, 1916.
Do.....	Importance of tropical diseases to American practitioner, as illustrated by their occurrence in the United States.	American Journal of Tropical Diseases and Preventive Medicine, July, 1915.
Do.....	Some practical points regarding the results and interpretation of the Wassermann test for syphilis.	Military Surgeon, March, 1916.
Culler, Capt. Robert M.....	An intermediate method of blood transfusion.	Awaiting publication.
Darby, Capt. Taylor E.....	Hygiene for the Boy Scouts.....	Pamphlet prepared for publication as a handbook for the Boy Scouts of America.
Davis, First Lieut. Henry L., Medical Reserve Corps.	A case of poisoning by methyl alcohol, fluid extract hamamelis, and a hair tonic, with recovery.	Awaiting publication.
De Laney, Maj. Matthew....	Epidemic of bacillary dysentery due to Hiss-Russell bacillus.	Military Surgeon, May, 1916.
Duncan, Capt. Louis C.....	Some experiences of the territorial armies of France, 1870-71 (translation from the French).	Journal of Military Service Institution.
Do.....	The sanitary service (translation from the French Journal L'Illustration).	Military Surgeon, January, 1916.
Ebert, Col. Rudolph G.....	Some Medical Department problems of over-seas garrisons.	Military Surgeon, August, 1916.
Edger, Maj. Benjamin J., jr.	Some cases of appendicitis at Schofield Barracks, Hawaii.	Read before United Service Medical Society of Hawaii, Dec. 4, 1915; awaiting publication.
Ferenbaugh, Capt. Thos. L..	A note concerning the occurrence of hydrophobia in the foxes of Alaska.	Military Surgeon, June, 1916.
Fisher, Lieut. Col. Henry C.	Preparedness of the Medical Department for war.	Military Surgeon, February, 1916.
Foster, Capt. George B., jr..	Etiology of common colds.....	Journal of American Medical Association, Apr. 15, 1916.
Foucar, Capt. Frederick H..	Bacillary dysentery, recent epidemic at Fort Shafter, Hawaii, from the laboratory aspect.	Military Surgeon, May, 1916.
Frick, Lieut. Col. Euclid B..	Venereal disease in the Army.....	Read before Ninth International Purity Congress, San Francisco, Cal., July 22, 1915.
Gorgas, Maj. Gen. W. C., Surgeon General.	Tropical sanitation in its relation to general sanitation.	Address delivered before fifteenth annual conference of health officers of New York State, at Rochester, Sept. 6, 1915; Journal of American Medical Association, Dec. 25, 1915.
Do.....	The relation that modern tropical sanitation will probably have on the future movements of populations.	Address delivered before Southern Commercial Congress at Charleston, S. C., Dec. 16, 1915.
Do.....	Report on the sanitation of Guayaquil.	The Southern Medical Journal, November, 1915.
Do.....	Dr. Carlos G. Finlay.....	Address delivered at forty-third annual meeting of American Public Health Association, Rochester, N. Y., Sept. 7, 1915.
Do.....	The effect that the sanitary work accomplished in Cuba and in Panama has had and will have upon the sanitation of the Tropics.	Address delivered before Vermont State Medical Society, Burlington, Oct. 14, 1915; Southern Medical Journal, February, 1916.
Do.....	Yellow fever.....	Commemoration volume of the American Medical Association, 1915.
Hess, Maj. Louis T.....	Paper on recruiting.....	Awaiting publication.
Do.....	Deficiency of sanitary units of the Organized Militia.	Military Surgeon, April, 1916.

Articles by medical officers of the Army, July 1, 1915, to June 30, 1916—Continued.

Author.	Article.	Disposition.
Hopwood, Capt. Lucius L....	Duties of ambulance companies.....	Military Surgeon, September, 1915.
Huntington, Capt. P. W....	Transmissible diseases in war.....	New York Medical Journal, July 8, 1916.
Do.....	Camp sanitation.....	Awaiting publication.
Johnson, Capt. H. H.....	The trailer ambulance.....	Military Surgeon, July, 1916.
Johnson, Capt. T. H.....	Diseases complicating chronic pulmonary tuberculosis.	Awaiting publication.
Jones, Capt. E. C.....	Transportation of ambulance companies.	Military Surgeon, November, 1915.
Jones, Capt. Harold W.....	The organization of an ambulance company.	Awaiting publication.
Jones, Capt. Percy L.....	Individual equipment for the Hospital Corps.	Read at twenty-fourth meeting of Association of Military Surgeons, Cincinnati, Ohio, September, 1915.
Do.....	The hospital train de luxe.....	Military Surgeon, October, 1916.
Kean, Col. Jefferson R.....	Lessons of the great war.....	Presidential address delivered before Association of Military Surgeons, Washington, Sept. 13, 1915. Military Surgeon, October, 1915.
Do.....	New rôle of American Red Cross...	Military Surgeon, May, 1916.
Keefer, Lieut. Col. F. R....	The sanitary problems of trench warfare.	Read before the annual meeting of United Service Medical Society of Hawaii, Honolulu, Jan. 8, 1916; Military Surgeon, June, 1916.
King, Capt. Edgar.....	The military delinquent.....	Read before twenty-fourth annual meeting of Association of Military Surgeons, September, 1915; Military Surgeon, December, 1915.
Do.....	Certain problems in the treatment of criminals who are mentally abnormal.	Read before annual meeting of Kansas conference of Charities and Corrections, Lawrence, Kans., Nov. 19, 1915; published as part of proceedings of sixteenth annual conference of Kansas Society of Charities and Corrections meeting with Kansas Society of Criminal Law and Criminology.
Do.....	The use of habit-forming drugs (cocaine and its derivatives) by enlisted men.	Military Surgeon, October, 1916.
La Garde, Col. Louis A., retired.	The new war surgery requires more surgeons.	Military Surgeon, March, 1916.
Leslie, Lieut. S. H., Dental Corps.	Dental service in the Army.....	Read before Massachusetts Dental Society, May 3-5, 1916; Journal of Allied Dental Societies, N. Y., June, 1916.
Lyster, Maj. W. J. L.....	Vaccination against typhoid in the United States Army.	Journal of American Medical Association, Aug. 7, 1915.
Do.....	Present status of disinfection of drinking water in the field.	Read at twenty-fourth annual meeting of Association of Military Surgeons, Cincinnati, Ohio, September, 1915; awaiting publication.
McKellar, Capt. Harry R....	Malingering.....	Awaiting publication.
Maddux, Capt. H. C.....	Hospital treatment of acute gonorrhea.	Military Surgeon, December, 1915.
Michie, Capt. H. C.....	Rocky Mountain spotted (tick) fever (collaborated with Dr. Houston H. Parsons).	Medical Record, Feb. 12, 1916.
Do.....	A tuberculosis survey of an Eskimo village.	Awaiting publication.
Miller, Maj. Reuben B.....	Proposed equipment for the Hospital Corps soldier.	Military Surgeon, April, 1916.
Do.....	The new manual for the Medical Department.	Military Surgeon, March, 1916.
Do.....	The new field belt for medical officers.	Military Surgeon, June, 1916.
Mudd, Capt. Leo C.....	Some experiences with venereal diseases at Schofield Barracks, Hawaii.	Read before United Service Society of Hawaii, Honolulu, Feb. 5, 1916; awaiting publication.
Munson, Lieut. Col. Edward L. ¹	Medical preparedness for campaign..	Read before Second Pan American Scientific Congress, Washington, D. C., Dec. 27, 1915; awaiting publication.
Do.....	The proper function of the Medical Department in relation to general staff work.	Read at Second Pan American Scientific Congress, Washington, D. C., Dec. 27, 1915; Military Surgeon, June, 1916.
Nelson, Maj. Kent.....	An Army motor ambulance.....	Read before twenty-fourth annual meeting of Association of Military Surgeons, Cincinnati, Ohio, September, 1915; Military Surgeon, February, 1916.

¹ Numerous editorial contributions to the Military Surgeon, the official organ of the Association of Military Surgeons of the United States, of which he has been the editor secretary since the last annual meeting of the association in Washington, September, 1915, have been made by this officer.

Articles by medical officers of the Army, July 1, 1915, to June 30, 1916—Continued.

Author.	Article.	Disposition.
Nelson, Maj. Kent.....	The use of mercury salicylate in syphilis; a record of its influence on the Wassermann reaction in 50 cases (collaborated with E. A. Anderson, M. D.).	Journal of American Medical Association, Nov. 27, 1915.
Nichols, Capt. H. J.....	Possible reasons for lack of protection after antityphoid vaccination.	Read by title at twenty-fourth annual meeting of Association of Military Surgeons, Cincinnati, Ohio, September, 1915; Military Surgeon, March, 1916.
O'Connor, Lieut. C. M.....	A record march by sanitary troops..	Awaiting publication.
Owen, Col. Wm. O.....	Relation of the Army Medical Corps and the Medical Reserve Corps to the Medical Corps of the Organized Militia.	Read at twenty-fourth annual meeting of Association of Military Surgeons, Cincinnati, Ohio, September, 1915; Military Surgeon, December, 1915.
Patterson, Maj. R. U.....	The American National Red Cross in first-aid and accident prevention.	Maryland Medical Journal, June, 1916.
Phalen, Maj. J. M.....	Typhoid prevention by bacterial vaccine.	Read before Outagamie County (W's.) Medical Society and officers of Second Infantry, Wisconsin National Guard, Appleton, Apr. 20, 1915; Wisconsin State Medical Journal, March, 1916.
Do.....	The Medical Reserve Corps, U. S. Army.	Read before Tristate Medical Society, Chicago, Ill., Oct. 7, 1915; Chicago Medical Record, March, 1916.
Do.....	The Camp McCoy School for Sanitary Troops.	Read before twenty-fourth annual meeting of the Association of Military Surgeons, Cincinnati, Ohio, Sept. 15, 1915; awaiting publication.
Powell, Lieut. Cuthbert, Medical Reserve Corps.	A consideration of a few of the many lessons in medicine and surgery taught by the present European war.	Read at meeting of Denver City and County Medical Society, Denver, Mar. 21, 1916; Colorado Medicine, May, 1916.
Raymond, Col. H. I.....	Duties of Medical Supply officers and their methods (collaborated with Maj. Edwin P. Wolfe).	Military Surgeon, July, August, September, and October, 1916.
Do.....	Observations upon the cure of syphilis.	New York State Journal of Medicine, January, 1916.
Reasoner, Capt. M. A.....	Some general information concerning the diagnosis and treatment of syphilis.	Awaiting publication.
Do.....	A case of hereditary syphilis.....	Read before District of Columbia Medical Society, Washington, Oct. 6, 1915; Washington Medical Annals, November, 1915.
Do.....	Some phases of experimental syphilis, with special reference to the subject of strains.	Read before meeting of American Medical Association, Detroit, Mich., June 14, 1916; awaiting publication.
Do.....	Early death from cerebral syphilis, with a successful rabbit inoculation: Report of a case.	Journal of American Medical Association, June 17, 1916.
Reno, Maj. Wm. W.....	A march and rail trip by sanitary troops.	Military Surgeon, September, 1915.
Do.....	The wheel litter travels.....	Military Surgeon, February, 1916.
Do.....	Pitching Army tentage.....	Infantry Journal, July-August, 1916.
Do.....	Laying out a field hospital.....	Military Surgeon, August, 1916.
Reynolds, Maj. C. R.....	Local anesthesia.....	Read before United Service Medical Society of Hawaii, Jan. 8, 1916; awaiting publication.
Schmitter, Capt. Ferdinand.	The treatment of leprosy.....	Awaiting publication.
Shaw, Lieut. Col. Henry A..	Transmissible diseases; syllabus of the.	Arranged for the course in military hygiene, U. S. Military Academy, 1916.
Shockley, Maj. M. A. W.....	The correspondence course for Medical Reserve officers as conducted at the Army service schools.	Military Surgeon, January, 1916.
Siner, Capt. J. I.....	The ductless gland.....	Awaiting publication.
Siler, Capt. Joseph F.....	Barbados in British West Indies....	American Journal of Tropical Diseases and Preventive Medicine, July, 1915.
Do.....	Pellagra in Jamaica.....	American Journal of Tropical Diseases and Preventive Medicine, February, 1916.
Skinner, Maj. G. A.....	Surgical experiences in Jolo, P. I....	Awaiting publication.
Smith, Capt. Lloyd.....	Syphilis as a cause of mental disease in the military service.	Military Surgeon, November and December, 1915.

Articles by medical officers of the Army, July 1, 1915, to June 30, 1916—Continued.

Author.	Article.	Disposition.
Snow, Capt. C. G.....	The Wassermann reaction and its relation to tuberculosis (collaborated with Capt. A. T. Cooper).	American Journal of Medical Sciences, August, 1916.
Tasker, Capt. A. N..	The diagnosis and treatment of the flagellate diarrheas (collaborated with Dr. Arthur F. Chace).	Read before meeting of American Medical Association, Detroit, Mich., June, 1916; awaiting publication.
Van Poole, Maj. G. M.....	A case of gunshot wound of abdomen with immediate operation.	Military Surgeon, December, 1915.
Do.....	An epidemic of dysentery at Fort Shafter, Hawaii, with 3 cases of Hiss-Russell or Y bacillus infection.	Military Surgeon, May, 1916.
Vedder, Capt. E. B.....	Beriberi and cottonseed poisoning in pigs: A preliminary note (collaborated with Dr. Geo. H. Rommel).	Journal of Agricultural Research, vol. 489, Dec. 13, 1915.
Do.....	Prevalence of syphilis.....	Therapeutic Gazette, May 15, 1916.
Do.....	The known and unknown with regard to the etiology and prevention of beriberi.	Read before Section VIII, Second Pan American Scientific Congress, Washington, D. C., December, 1915; Military Surgeon, October, 1916.
Do.....	The relation of diet to beriberi.....	Read at meeting of American Medical Association, Detroit, Mich., June, 1916; awaiting publication.
Do.....	Remarks on the prevalence and prevention of syphilis.	Social Hygiene, July, 1916.
Von Schrader, Capt. A.....	The importance of the early recognition of syphilis as a causative factor in delayed union of fractures.	Awaiting publication.
Wadhams, Maj. S. H.....	Report of discussion at joint camp of instruction for sanitary troops, Tobyhanna, Pa.	Do.
Do.....	The civilian physician's part in the scheme of preparedness.	Do.
Wilcox, First Lieut. R. W., Medical Reserve Corps.	Medical Corps in peace and war.....	Address delivered before graduate class of Army Medical School, Washington, D. C., June 1, 1915; Military Surgeon, July, 1915.
Wilde, Capt. A. G.....	Army medical records.....	Awaiting publication.
Wolfe, Maj. Edwin P.....	Duties of Medical Supply officers and their methods (collaborated with Col. H. I. Raymond).	Military Surgeon, July, August, September, and October, 1916.

SANITARY TROOPS—NATIONAL GUARD.

Since the date of last report the following new organizations have been completed up to June 30, 1916: 4 ambulance companies, 3 field hospitals, and 14 detachments, making a total of 22 ambulance companies, 31 field hospitals, and 174 detachments. Since June 30 there have been completed 4 ambulance companies and 7 field hospitals, making a total of 8 ambulance companies and 10 field hospitals organized since last report. The following table shows the existing sanitary units and the number required for the 12 National Guard divisions, also the States furnishing same, and those deficient:

Division.	States comprising divisional districts.	Organized.	Shortage.
Fifth.....	Maine, none; New Hampshire, 1 F. H.; Vermont, none; Massachusetts, 2 F. H. and 2 A. C.; Connecticut, 1 F. H. and 1 A. C.; Rhode Island, 1 A. C.	4 F. H.... 4 A. C.....	None.
Sixth.....	New York, 4 F. H. and 4 A. C.....	4 F. H.... 4 A. C.....	Do.
Seventh.....	Pennsylvania, 2 F. H. and 2 A. C.....	2 F. H.... 2 A. C.....	2 F. H. 2 A. C.
Eighth.....	New Jersey, 1 F. H. and 1 A. C.; Delaware, none; District of Columbia, 1 F. H.; Maryland, 1 F. H. and 1 A. C.; Virginia, 1 F. H.; West Virginia, none.	4 F. H.... 2 A. C.....	2 A. C.

Division.	States comprising divisional districts.	Organized.	Shortage.
Ninth.....	North Carolina, 1 F. H. and 1 A. C.; South Carolina, 1 F. H.; Georgia, 1 F. H.; Florida, 1 F. H.	4 F. H.... 1 A. C....	3 A. C.
Tenth.....	Kentucky, 1 F. H. and 1 A. C.; Tennessee, 1 F. H. and 1 A. C.; Alabama, 1 F. H. and 1 A. C.; Mississippi, none.	3 F. H.... 3 A. C....	1 F. H. 1 A. C.
Eleventh.....	Ohio, 3 F. H. and 2 A. C.; Michigan, 1 F. H. and 2 A. C.....	4 F. H.... 4 A. C....	None.
Twelfth.....	Illinois, 2 F. H.; Indiana, 1 F. H. and 2 A. C.....	3 F. H.... 2 A. C....	1 F. H. 2 A. C.
Thirteenth...	Iowa, 1 F. H. and 1 A. C.; Wisconsin, 1 F. H.; Minnesota, none; North Dakota, none; South Dakota, none.	2 F. H.... 1 A. C....	2 F. H. 3 A. C.
Fourteenth...	Colorado, 1 F. H.; Nebraska, 1 F. H.; Missouri, 1 F. H. and 1 A. C.; Kansas, none; Wyoming, none.	3 F. H.... 1 A. C....	1 F. H. 3 A. C.
Fifteenth.....	Louisiana, 1 F. H.; Oklahoma, 1 F. H. and 1 A. C.; Texas, 1 F. H.; Arizona, none; New Mexico, none; Arkansas, none.	3 F. H.... 1 A. C....	1 F. H. 3 A. C.
Sixteenth.....	California, 1 F. H. and 1 A. C.; Utah, 1 F. H.; Washington, none; Oregon, none; Idaho, none; Nevada, none.	2 F. H.... 1 A. C....	2 F. H. 3 A. C.
Total.....		38 F. H.... 26 A. C....	10 F. H. 22 A. C.
Total units.....		64.....	32.

While this increase in sanitary units is encouraging, it was largely due to mobilization of the National Guard, with prospects of active service. Newly organized sanitary units, under most favorable conditions, could not be made ready for efficient service in campaign within a less period than six months of intensive training after receiving their equipment and transportation. The formation of these organizations should not await the necessity for them by a threatened conflict. They should be organized, equipped, and trained in time of peace. If this mobilization results in impressing upon the medical profession and the responsible State authorities the necessity of adequate sanitary units, properly trained and equipped in time of peace, it will have done much toward the cause of preparedness.

The strength of the sanitary troops on June 30 was 884 officers and 4,436 enlisted men, a total gain of 884 during the year. The strength has been greatly augmented since mobilization by new units and detachments, also by increasing the personnel of organizations to war strength.

Out of a total of 884 commissioned officers, 125 were not inspected. Of 4,436 enlisted men, 539 were absent from the inspection. While this is an improvement over last year, yet it is a large number for which there is no accurate information as to their suitability and qualifications for military service.

In the majority of the States the efficiency of the sanitary troops relative to organization, training, and equipment shows improvement over last year, although it is far from having reached the desired standard which is necessary if immediate use of these organizations for campaign is considered. The degree of efficiency differs widely. In many States but a short period of preparation would be needed to make the sanitary troops ready for field service. In others, however, much time and labor would be required.

INSTRUCTION AND TRAINING.

In addition to the number of inspector-instructors reported last year, one other was authorized and assigned to the States comprising the fifth division, making a total of 6 medical officers of the Regular Army on this duty. All have shown commendable zeal in their efforts

to increase interest among the sanitary troops, and to improve their efficiency, but the number is entirely inadequate to accomplish the results desired. However, the results have been so gratifying and the numerous requests from States for additional officers, warrants the detailing of at least five or six medical officers to each of the 12 divisional districts. This would make it possible for frequent visits of instruction to sanitary organizations, while with the present number only two visits of instruction can be made to the organizations in the district to which the inspector-instructor is assigned, and this pertains only to the fifth, sixth, seventh, eighth, ninth, tenth, eleventh, twelfth, and part of the thirteenth divisions. The sanitary organizations of the remaining divisions can not be accorded this opportunity for personal instruction because of lack of sufficient inspector-instructors. The number of sergeant-instructors for sanitary troops was increased during the year by three at the earnest request of the Militia Bureau, making a total of 15 on this important duty. The result of their work warrants the detailing of a sergeant of the Medical Department for each National Guard sanitary unit, and sufficient additional ones to provide adequate instruction to the sanitary detachments. The value accruing to the Federal Government of detailing of officers and noncommissioned officers with the National Guard from the viewpoint of increasing their efficiency can not be overestimated. The money spent in this way will produce results that can not be secured by any other method.

CORRESPONDENCE COURSE.

In addition to the personal instruction, a correspondence course for medical officers of the National Guard was conducted by the inspector-instructors. Upon request, the War Department detailed sufficient medical officers from near-by posts, who, in addition to their post duties, conducted the correspondence course in these States for which no sanitary inspector-instructors were provided. While these officers performed the duty assigned to them in a satisfactory manner and the medical officers of the National Guard were able to get some theoretical instruction, yet the numerous changes of station of these officers seriously interfered with the work and made it impossible to secure the good results obtained by the inspector-instructors. The policy adopted last year of having all the questions prepared and sent out from the Militia Bureau establishing a uniform, systematized, and correlated course, has proved much more satisfactory than the previous method of having each inspector-instructor prepare the questions for his district. It is deemed advisable to continue this method. More than 60 per cent of the medical officers successfully completed the prescribed course. No reports were received from some States, partly due to the mobilization order, and partly to the necessity of sending the medical officers conducting the course to the border for duty. The best showing was in States having medical officers detailed as inspector-instructors.

PHYSICAL EXAMINATION AND TRAINING.

Recent reports received show that all States, except two, have adopted the physical standards prescribed for the Regular Army, and the majority of the States claim a rigid enforcement of same.

Reports of inspectors indicate that great laxity exists in the majority of the States in this matter, which has been confirmed by the recent mobilization. In view of the fact that the requirements of the regular service make it necessary that the physical findings at each and every enlistment and reenlistment must be passed upon by a medical officer, it would appear that the Medical Corps of the National Guard was responsible for any of the personnel found physically disqualified. This is no doubt true to a certain extent. However, in order to determine to what extent they are responsible, those who were enlisted without a physical examination, those who were enlisted in spite of rejection by medical officers, and those who were examined by civilian doctors whose reputation was not at stake, should be eliminated. It is not deemed advisable to expend money on the training and instruction of men who, when needed for active service, are found to be physically disqualified. Every man in the National Guard should be physically qualified for any duty devolved upon him. This can best be accomplished by instituting a thorough physical reexamination of each person as soon as practicable after enlisting and reenlisting in the National Guard by a medical officer of the regular service, also that the same be done annually for the commissioned personnel. In this way the physically disqualified could be weeded out, and those having defects that are not disqualifying could have them waived, resulting in not more (barring venereal diseases and acute maladies) than 1 per cent of the personnel being found disqualified when called into the Federal service.

There are a large number of persons rejected for physical defects, such as poor physique, deficient chest expansion, and similar defects, who do not conform to the prescribed standard physical requirements, but who under proper physical training would in a short time meet these requirements and be able to endure the physical strain of campaign. If more time and attention were paid to the physical development and training of a soldier, a large number of the above type of men could in time of peace be enlisted in the National Guard and Army without decreasing its efficiency.

TYPHOID PROPHYLAXIS.

There is very little change in the status of typhoid prophylaxis as reported last year. Some States have given considerable attention to the matter, while others have not. The annual inspection report shows that 2,481 officers and 24,866 enlisted men had received complete antityphoid prophylaxis out of a reported strength of 8,864 officers and 129,333 enlisted men, making a total of 27,347 protected against typhoid fever out of a total strength of 138,197. As compared with the report of last year, showing 22,551 receiving complete antityphoid prophylaxis out of a total strength of 129,398, making 19.78 per cent during the past year, as against 17.4 per cent during the year previous. This increase is encouraging. However, too large a percentage are unprotected. It is believed the recent mobilization, which brought the National Guard under regulations prescribed for the Regular Army, requiring vaccination of all persons in the Federal service, will do much toward further popularizing these preventive measures, and it is further believed that the time has arrived to make it compulsory in the National Guard, thereby making it prepared for a hasty call into the Federal service.

ACT OF JUNE 3, 1916.

The act of June 3, 1916, contains much beneficial legislation, which, when enforced, will greatly improve the efficiency of the Medical Department of the National Guard. It provides for uniform courses of armory and field instruction, along lines prescribed for the Regular Army. It provides for an increased number of inspectors and sergeant instructors. It provides for horses for the sanitary troops, and it provides for examination of medical officers and noncommissioned officers under Federal supervision. It will mean greater devotion to duty, and acquisition of military knowledge on the part of the personnel.

CONSTRUCTION AND REPAIR OF HOSPITALS.

During the past year plans and specifications were prepared and contracts were entered into for the construction of additions to hospital buildings at the following general hospitals and military posts:

Letterman General Hospital, San Francisco, Cal.—New concrete ward, medical and surgical dispensary, addition to nurses' dormitory, and an addition to the department laboratory.

Fort Bliss, Tex.—Rear annex addition to hospital containing kitchen, mess room, and dormitories for the Hospital Corps detachment.

Fort Sam Houston, Texas.—Building for central heating plant, a department laboratory, dormitories for the Hospital Corps detachment, and a surgical pavilion.

Temporary buildings for hospital purposes in connection with the Mexican border were also provided from the appropriation for construction and repair of hospitals at Fort Bliss, Camp Douglas, and Fort Sam Houston.

In addition to the regular annual appropriation for construction and repair of hospitals, Congress appropriated \$100,000 to construct temporary buildings for hospital purposes on the Mexican border, or where necessary. Fifty-eight thousand dollars of these funds went to Brownsville, Eagle Pass, and Laredo, Tex., and Nogales, Ariz., and \$25,000 to Fort Sam Houston, Tex. The \$17,000 remaining will be needed for additional construction at the first four places, and request was made for \$1,000,000 additional to provide for general hospitals and temporary hospital accommodations for the large number of troops on duty at the Mexican border.

The following hospital buildings which were contracted for during the fiscal year which ended June 30, 1915, have been completed: Building for central heating plant, Fort Leavenworth, Kans. Rear annex addition to hospital, Fort Oglethorpe, Ga., containing kitchen, mess room, and dormitories for the Hospital Corps detachment. Clinic laboratory and nurses' dormitory, department hospital, Honolulu, Hawaii. Rear annex addition to hospital Fort Terry, N. Y., containing kitchen, mess room, and dormitories for the Hospital Corps detachment. Hospital Corps barrack building, storehouse, and one double set of noncommissioned officers quarters for the Army and Navy General Hospital, Hot Springs, Ark., also addition to ward building No. 6, operating pavillion and diet kitchen. A ward for

special surgical cases, a new concrete ward, and an addition to the Nurse Corps dormitory were completed for the Letterman General Hospital, San Francisco, Cal., and a ward for ambulant patients at the General Hospital, Fort Bayard, N. Mex.

An allotment of \$40,000 was made from the appropriation for construction and repair of hospitals for use in the Philippine Department during the fiscal year, and \$1,000 was allotted from the appropriation for quarters for hospital stewards, for quarters for sergeants, first class, Hospital Corps, to cover the cost of construction and repair of quarters for these noncommissioned officers in the Philippine Islands.

In addition to the foregoing, all general hospitals in connection with the Army, and the hospitals at military posts were improved or kept in proper repair so far as funds would permit. Temporary hospitals for standing camps and cantonments were also provided in a number of cases.

The Army and Navy General Hospital, Hot Springs, Ark., has been improved in a manner to meet several of the most important necessities, and it is believed that sufficient additional accommodations for patients can be provided when required by inclosing the porches with glazed sash, thus avoiding the necessity for further ward buildings, and no new construction is estimated for this general hospital for the fiscal year 1918.

General Hospital, Fort Bayard, N. Mex.—A few years ago authority was given to erect three additional ward buildings for this general hospital, but it was possible to enter into contact for the erection of only two of these wards, and the following buildings are now necessary: One infirmary for enlisted men, estimated to cost \$50,000; one infirmary for officers, estimated to cost \$60,000, and an addition to the officers' dormitory, estimated to cost \$40,000, or a total of \$150,000, and funds for these buildings have been included in the annual estimate for the fiscal year 1918.

Letterman General Hospital, San Francisco, Cal.—The wards of this hospital are constructed of wood, and have been in use for quite a number of years, and are dangerous in case of fire. It is proposed to safeguard the lives of patients by replacing these wooden buildings from time to time with reinforced concrete structures, and \$75,000 is included in the annual estimate for the fiscal year 1918, to be used for this purpose.

Walter Reed General Hospital, Takoma Park, D. C.—This is one of four general hospitals. It is one of the most important, and is used for the treatment of officers, retired officers, patients from Washington Barracks, enlisted men, special cases, observation of patients under consideration for discharge on account of disability, and for the education of students attending the Army Medical School. New buildings and additions have been erected from time to time. Two new one-story wards have lately been added to the east and west ends of the administration building, and these two ward wings require additional stories to complete them. The additional room is necessary and these improvements are estimated to cost \$90,000, and funds for this purpose have been included in the annual estimate for the fiscal year 1918.

As stated in previous reports, new modern hospitals are required at various military posts to replace old and dilapidated structures which have been in use for many years, and which require large sums

of money annually for repairs and improvements. New buildings of modern type would be economical, but it is impossible to erect a suitable modern military hospital for the maximum sum allowed by law from the general appropriation for such purposes. Section 1136, Revised Statutes of the United States, limits the cost of permanent structures to \$20,000, unless special authority is first obtained from Congress. This law was enacted in or before 1859 when material and labor were much lower in price than they are at present, and before many modern plumbing and other necessary fixtures were available which are now indispensable. The statute limiting cost should be modified to suit present conditions.

Fort Michie, N. Y.—The hospital at this post is a temporary wooden structure, and the inspecting officer stated September 14, 1915, that the hospital building is unsuitable, and if it is intended to maintain a permanent garrison at Fort Michie, a new hospital will be needed. In 1905, the Secretary of War authorized the use of funds to erect a new hospital at this post, but owing to location, cost of transportation, etc., it was not possible to erect a suitable hospital within the limit of cost fixed by section 1136, Revised Statutes of the United States. A modern hospital for this post is estimated to cost \$30,000.

Fort McPherson, Ga.—The hospital at this post is in size entirely inadequate. It is located in close proximity to a railroad and has no cellar except a small excavation for a heating apparatus, which was made some years after the building was erected. The heating and ventilation are not suitable for a modern hospital. The plumbing is crude, and efforts have been made from time to time to improve it, but it falls far short of meeting the modern sanitary requirements. The operating room is located in a small annex, with a small laboratory adjoining. There is no instrument room, etherizing room, preparation room, nor surgical ward. There is no suitable ward for the isolation of contagious diseases, nor prison ward; and the Hospital Corps detachment is quartered in an old temporary wooden building which was erected for use as a ward during the Spanish-American War. The mess room and kitchen are too small and are unsuited for their purpose, it being necessary to set tables two or three times to accommodate the patients. The entire hospital is such that it would be in the interest of economy to replace it with a modern structure. A hospital should be erected with a capacity of 87 beds for patients, necessary attendants, noncommissioned officers, etc. The estimated cost of such a building is \$90,000.

Fort Dade, Fla.—In 1910 the surgeon at this post recommended that a new hospital be erected, and stated:

The kitchen and dining room are near the center of the building, and it is necessary to pass through them in going from the operating room to the ward. The ward is too small, and the quarters for hospital corps men are inadequate. It is not believed that the present structure can be remodeled to meet the requirements of a modern hospital.

The present hospital is entirely inadequate and unsuitable. It is a temporary structure with crude plumbing, lacks modern appliances, and the conditions are such that they can only be remedied by the erection of a new hospital. A suitable building is estimated to cost \$35,000.

Schofield Barracks, Hawaii.—The department authorities prepared sketch plans for a 250-bed hospital, which is considered necessary for this post. An approximate estimate of the contemplated strength of the garrison of Schofield Barracks is 6,000 men, and this will require the number of beds estimated for. In addition to the bed capacity, other buildings will be needed in the future to complete the group, but six wards and an administration building will be sufficient for the present. The estimated cost of these buildings is \$150,000.

Army Medical School.—This school occupies a rented building in the city of Washington, at a rental of \$8,680 per annum. As it is one of the permanent service schools it would be much more economical, as well as more fitting and convenient, for it to be housed in buildings erected by the Government. It is proposed to locate these on the tract of land occupied by the Walter Reed General Hospital, so that the students may have the clinical advantages and the instruction in administration afforded by the hospital, and that the hospital may enjoy the laboratory conveniences of the school. These buildings are estimated to cost \$350,000.

Quarters for sergeants, first class, Hospital Corps.—Owing to the limited appropriation for these buildings, it was not possible to erect additional quarters, and various necessary additions and improvements had to be disallowed. A number of large military posts are in need of such quarters for these noncommissioned officers, and the appropriation should be liberal until such time as the Hospital Corps sergeants are supplied with suitable habitations. Eleven single sets and seven double sets of these quarters are needed, but only the most necessary are included in the annual estimate for the fiscal year 1918.

Estimates for new construction which is essential to the proper care of the sick have been for some years lopped off the estimates in accordance with the instructions of the Secretary of War in order to reduce the War Department estimates until the necessities of the department, in this respect, have become very urgent and have accumulated to a large total. The following are the items which are considered to be most necessary, and are accordingly included in the estimates laid before the Secretary of War for the fiscal year 1918:

New construction:

Army general hospital, Fort Bayard, N. Mex.....	\$150,000
Letterman General Hospital, San Francisco, Cal.....	75,000
Walter Reed General Hospital, Takoma Park, D. C.....	90,000
Fort Michie, N. Y.....	30,000
Fort McPherson, Ga.....	90,000
Fort Dade, Fla.....	35,000
Schofield Barracks, Hawaii.....	150,000
To enlarge and improve hospitals at Artillery posts.....	50,000
Additions and repairs, general hospitals.....	65,000
Repairs, hospitals, all posts in the United States.....	200,000
Repairs, Hawaiian Department.....	30,000
Repairs, Philippine Department.....	50,000
Army Medical School.....	350,000

Total for construction and repair of hospitals.....	<u>1,365,000</u>
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Hospital Corps sergeants' quarters:

6 single sets, new quarters.....	21,000
4 double sets, new quarters.....	26,000
Philippine Islands, repairs, etc.....	1,000
Repairs, all posts in the United States.....	15,000

Total for Hospital Corps sergeants' quarters.....	<u>63,000</u>
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MEDICAL AND HOSPITAL SUPPLIES.

The appropriation made by Congress for the fiscal year 1916 for the support of the Medical Department was \$787,500, this being \$87,500 more than the amount appropriated for the fiscal year 1915.

The new Manual for the Medical Department was completed and ready for promulgation about June 15. It is being issued by The Adjutant General of the Army. This manual prescribes a medical officer's belt and a belt for the Hospital Corps medical equipment, both recommended by the equipment board. The latter is intended to take the place of the pouch, Hospital Corps, M. M. D., 1911. Since this new personal equipment has been approved various difficulties have arisen with reference to the manufacture of the other ordnance equipment which should be issued with it. The issue of this equipment is therefore being held in abeyance, and the old equipment will be continued in use for the present.

The medical supply depot at Galveston, Tex., being no longer needed, was discontinued about January 7, 1916. Field medical supply depots have been established at San Antonio and El Paso, Tex., for the purpose of promptly furnishing supplies to the border camps. A reserve medical supply depot was also temporarily established at the advance base, Columbus, N. Mex. Later this was discontinued, it being decided that all necessary supplies for this vicinity could be satisfactorily obtained from the El Paso depot. In addition a divisional reserve supply was furnished to the punitive expedition and located at Colonia Dublan, Mexico. A new medical supply depot for the storage and issue of both post and field supplies was established in Honolulu, Hawaii, in March, 1916.

Motor ambulances have been furnished to the ambulance companies in Mexico, and field hospital No. 7 has been equipped with motor trucks. Ambulances of the following type have been purchased: G. M. C., Buicks, White, Service, and Fords. Trailers were also furnished with these ambulances for trial. The light cars and trailers were found to be unsatisfactory for use in Mexico.

At the beginning of the militia mobilization period the officers in charge of the medical supply depots at New York and St. Louis were directed to purchase full ward equipment for one hundred 50-bed wards as promptly as possible, with a view to having these complete equipments ready for emergency use on the border.

Sufficient typhoid and smallpox vaccines were furnished to each mobilization camp for the immunization of the Organized Militia, and a camp hospital was furnished to each mobilization camp not located at a post for the care and treatment of members of the Organized Militia who required such attention at the camp. The post hospital and medical supplies were available for the use of all mobilization camps located at Army posts.

ARTIFICIAL LIMBS AND APPARATUS.

Under the laws relating to artificial limbs and apparatus or commutation therefor, orders on manufacturers were given during the fiscal year for 22 artificial legs and 1 foot. Commutation certificates were issued for 129 cases of amputated leg, 77 of amputated arm, 9 of amputated foot, and 1,320 cases of loss of use of limb.

Under the act of June 17, 1870, and subsequent amendments thereto, 23,703 disabled soldiers and sailors have been furnished artificial limbs and apparatus or have received commutation in money since the passage of the act, as follows:

Total number benefited to June 30, 1916.....	23, 703
Died.....	16, 053
Dropped from rolls.....	592
Rejected after one or more payments.....	572
Remaining on rolls at end of fiscal year.....	6, 486
Loss of beneficiaries during the year.....	367

It is estimated that the sum of \$210,000 will be required to pay the claims during the fiscal year ending June 30, 1918.

APPLIANCES AND TRUSSES.

One hundred and sixteen appliances were issued during the fiscal year ending June 30, 1916, and 204 trusses for disabled soldiers were furnished and fitted.

LIBRARY OF THE SURGEON GENERAL'S OFFICE.

During the year 430 books and 3,407 pamphlets and journals were presented to the library, and 256 portraits were added to the collection. The library now contains 226,128 volumes, bound and unbound (of which 191,802 are bound), and 337,110 pamphlets, a total of 563,238 volumes and pamphlets. It is now receiving 1,895 periodicals exclusive of transactions of societies. Eight hundred and two volumes were bound during the year. The following table shows in detail the additions made to the library during the year:

	On hand June 30, 1915.	Added during fiscal year.	Total June 30, 1916.
Medical journals.....	60, 480	1, 805	62, 285
Medical transactions.....	8, 990	47	9, 037
Bound theses.....	3, 099	492	3, 591
Other bound volumes.....	113, 068	3, 731	116, 799
Total.....	185, 637	6, 165	191, 802
Unbound volumes.....	33, 888	438	34, 326
Pamphlets.....	241, 653	95, 457	337, 110
Total.....	275, 541	95, 895	371, 436

Volume XXI of the second series of the Index Catalogue is in course of preparation and will appear in due time. A complete list, arranged alphabetically, of the medical periodicals and transactions of societies in the library will be published with this, the concluding volume of the second series of the catalogue.

To meet the needs of the library in its scientific and technical branches, the following changes have been submitted in the estimates:

Principal assistant librarian, from \$2,250 to \$2,500 per annum, an increase of..	\$250
Assistant librarian, from \$1,800 to \$2,000 per annum, an increase of.....	200
Superintendent of reading room, \$1,800 (from clerk at \$1,600), an increase of.	200
Superintendent of library hall, \$1,800 (from clerk at \$1,400), an increase of.	400
Total increase.....	1, 050

Of this increase, \$500 was made up last year by the abolition of one clerkship at \$900 with this end in view. The net increase asked for over former appropriations is, therefore, \$550.

These increases are necessary to give salaries equivalent to those paid in other departments of the Government (Library of Congress, etc.). The salaries in this library have been at a standstill for many years, while other departments have had increases. This was due, perhaps, principally to the fact that the employees here have been mostly designated as clerks, although doing the same class of work as men with professional titles elsewhere. The change is especially necessary in view of the very large Army expansion now taking place. It is hoped that the continued efficiency of the library may be provided for in this way by Congress at its next session.

It is also urgently recommended that the following provision be inserted in the legislative, executive, and judicial bill:

SUNDAY OPENING: To enable the library of the Surgeon General's Office to be kept open for reference use from four-thirty until ten o'clock, post meridian, daily, and from two until ten o'clock post meridian on Sundays and legal holidays, within the discretion of the librarian, including the extra services of employees and the services of additional employees under the librarian, \$5,000, or so much thereof as may be necessary."

This would put the Surgeon General's library on the same basis as to opening as the Library of Congress, and it is asked for in response to urgent demands from the medical profession of the country for improved service by the library.

ARMY MEDICAL MUSEUM.

The total number of specimens in the museum at the close of the fiscal year June 30, 1916, is 47,313.

The following statement shows in detail the additions and changes in the different sections:

Pathological section:	
In museum June 30, 1915.....	13, 038
Discarded.....	5
Donated.....	123
	<hr/> 123
	12, 910
Received during the year.....	179
	<hr/> 13, 089
Anatomical section:	
In museum June 30, 1915.....	1, 205
Received during the year.....	46
	<hr/> 1, 251
Comparative anatomy section:	
In museum June 30, 1915.....	624
Donated.....	23
	<hr/> 601
Microscopical section: In museum June 30, 1915 and 1916.....	
	<hr/> 12, 916
Miscellaneous section:	
In museum June 30, 1915.....	3, 975
Discarded.....	1
	<hr/> 3, 974
Received during the year.....	40
	<hr/> 4, 014
Provisional anatomy section: In museum June 30, 1915 and 1916.....	
	<hr/> 293
Photographic section including negatives:	
In museum June 30, 1915.....	14, 944
Received during the year.....	205
	<hr/> 15, 149

RECAPITULATION.

In museum June 30, 1915.....	46, 995
Discarded and donated.....	152
	<hr/> 46, 843
Added during the year.....	470
	<hr/> 47, 313
In museum June 30, 1916.....	47, 313

The following are some of the more interesting specimens received during the year ending June 30, 1916:

Malformations.—Specimen 14491, a pig showing syncephalus; purchased. Specimen 14621, male infant showing decephalus dibrachius; purchased. Specimen 14479, skull of idiot showing microcephaly; capacity 765 cubic centimeters; purchased. Specimen 14455, skull of adult showing deformity caused by premature closure of sutures; purchased. Specimen 14621, dicephalus dibrachius, human; purchased.

Ectopic pregnancy.—Specimen 14406, tubal pregnancy at two months removed by operation; recovery; woman, aged 42. Contributed by Capt. J. W. Hanner, Medical Corps, United States Army.

Animal parasites.—Specimen 14587, hookworm exhibit of the International Health Commission; consists of models, transparencies, photographs, and stereomotograph. Specimen 14511, filaria sanguinis hominis Bancrofti. Contributor, Dr. Leonel Plasencia, Habana, Cuba. Specimens 14624–14626, Echinococcus cysts in liver and spleen; soldier, aged 22. Died suddenly. Contributed by Capt. C. T. King, Medical Corps, United States Army.

Fibro-sarcoma of leg.—Specimen 14494, soldier, aged 35; amputation of leg; recovery. Contributed by Maj. G. A. Skinner, Medical Corps, United States Army.

Hernia through diaphragm.—Specimen 14457, colon through diaphragm; man, aged 40; had lifted heavy weight; died the thirteenth day. Contributed by Col. G. L. Edie, Medical Corps, United States Army.

Quintuplets.—Specimen 14503, born at seven and a half months; all males; one placenta; five cords; lived from 5 to 15 days; purchased. Exceedingly rare; about once in more than a million births.

Amebic dysentery.—Specimen 14461, large ulcers of colon, edges partly healed; soldier, aged 57; died of bowel obstruction from peritoneal adhesions. Contributed by Col. H. C. Fisher, Medical Corps, United States Army.

Brain.—Specimen 14471, acute meningitis from streptococcus; man, aged 35. Had protrusion of eyes and thrombus in ophthalmic veins. Original cause believed to have been a boil on the nose. Contributor Dr. J. H. Bryan, Washington, D. C. Specimen 14451, acute purulent meningitis, from staphylococcus pyogenes aureus. Soldier, had acute endocarditis (see 14452). Contributed by Capt. J. W. Griesinger, Medical Corps, United States Army. Specimen 14405, abscess in left frontal lobe, streptococcus and pneumococcus. From an old soldier who had a small abscess also in mediastinal lymphatic nodes. Contributor, Capt. A. D. Tuttle, Medical Corps, United States Army.

Heart.—Specimen 14493, adhesive pericarditis; calcareous plates. Same case as 14492, cancer of liver. Contributor, Capt. C. L. Cole, Medical Corps, United States Army. Specimen 14452, acute endocarditis vegetations on mitral valve; soldier. Same case as 14451, meningitis. Contributor, Capt. J. W. Griesinger, Medical Corps, United States Army. Specimen 14510, acute gonorrheal endocarditis; culture showed gonococci; soldier, aged 26. Contributor, Col. G. L. Edie, Medical Corps, United States Army.

Goiter.—Specimen 14472, adenoma, from a man. Contributor, Capt. D. P. Card, Medical Corps, United States Army.

Myelogenous leukemia.—Specimen 14622, spleen weighing 8½ pounds. Soldier, aged 41. Had been ill about a year. Contributor, Capt. A. D. Tuttle, Medical Corps, United States Army.

Teeth.—Specimens 14463 to 14465, anomalies and diseases. Contributor, First Lieut. H. G. Voorhies, Dental Corps, United States Army.

Duodenum perforating ulcer.—Two cases, specimen 14458, soldier, aged 28, was ill three days, had had "indigestion." Also specimen 14459, a soldier. Both specimens contributed by Capt. H. J. Nichols, Medical Corps, United States Army.

Appendicitis.—Specimen 14623, large concretion in appendix; from a soldier; appendectomy; recovery. Contributor, Capt. C. E. Doerr, Medical Corps, United States Army.

Pneum.—Diverticulum, specimen 14627, causing fatal bowel obstruction. Contributor, First Lieut. S. T. Millard, Medical Corps, United States Army.

Liver.—Specimen 14508, shot laceration; soldier; died four hours after injury. Contributor, Capt. H. J. Nichols, Medical Corps, United States Army. Specimen 14568, abscess; amebæ not found; man, aged 37, had been fireman 15 years on transport. Contributor, Capt. W. H. Allen, Medical Corps, United States Army. Specimen 14492 primary carcinoma, weight 11 pounds 2 ounces; soldier; had also adhesive pericarditis (14493), Contributor, Capt. C. L. Cole, Medical Corps, United States Army. Specimen 14509, common bile duct obstructed by gallstone; woman; aged 45; had had epigastric pain for 16 years; obstructive jaundice for 2 months; hemorrhage from bowel. Contributor, Col. G. L. Edie, Medical Corps, United States Army.

Urinary organs.—Specimen 14456, kidney; weight, 46 ounces; multiple cysts and miliary abscesses; other kidney in same condition; man, aged 47; specimen removed after death. Contributor, Lieut. T. S. Proxmire, Medical Reserve Corps, United States Army. Renal calculi, three cases; specimens 14467, 14468, and 14469; from soldiers; removed by operation; recovery. Contributed by Capt. J. W. Hanner, Medical Corps, United States Army. Specimen 14462, calculus from ureter; discharged through urethra; man, aged 18. Contributor, Capt. J. L. Robinson, Medical Corps, United States Army. Specimen 14470, calculus from urinary bladder; removed by operation, recovery; soldier. Contributor, Capt. J. W. Hanner, Medical Corps, United States Army. Specimen 14629, laceration of kidney from kick of mule; nephrectomy; recovery. Contributor, Maj. R. F. Metcalfe, Medical Corps, United States Army. Specimen 14628, uterine fibroid; woman, age 41; hysterectomy. Contributor, Capt. W. H. Moncrief, Medical Corps, United States Army.

Bone.—Specimens 14497 to 14499, multiple injuries; specimen 14497, healed fracture right radius; specimen 14498, dislocation right hip joint; head of femur atrophied; acetabulum perforated; specimen 14499, healed fracture left femur. From woman about 38 years of age; purchased. Specimens 14577, 14578, osteomalacia; skull and pelvis; from an idiot, aged 26, who had also spondylitis deformans; purchased. Specimens 14569 to 14586, series of bones from Indian burial places, showing anomalies, fractures, and inflammation. Contributor, Clarence Moore, Philadelphia, Pa. Also series of

bones showing anomalies, inflammation, fractures, and dislocations. Purchased.

Anatomical dissections.—Specimens 4177 to 4184 and 4189 to 4192, series of normal preparation of joints and muscles; purchased. Specimen 4162, dissection of arm, forearm, and hand. Contributor, Dr. Edmond Souchon, New Orleans, La.

Miscellaneous.—Specimen 4179, a prosthetic appliance made by Dr. J. P. Michaels, dentist, Paris, France, to replace excised portion of humerus. Contributed by Dr. E. A. Bogue, New York City. Specimen 4178, Sims's duckbill speculum, presented by Dr. Sims to Prof. Alonzo B. Palmer, of University of Michigan, by him to the father of Maj. W. J. L. Lyster, Medical Corps, United States Army, who gave it to the museum. Specimens 4154 to 4177, series of first-aid packages, missiles, etc., from the European war. Contributor, Maj. J. H. Ford, Medical Corps, United States Army.

DENTAL AND ORAL DISEASES.

TABLE No. 47.—*Dental and oral diseases, year 1915, officers and enlisted men.*

	Cases admitted to treatment.		Operations performed.	
	Number.	Ratio.	Number.	Ratio.
United States (continental) exclusive of Alaska.....	72,747	1,089.21	88,663	1,327.51
Philippine Department.....	17,777	987.34	18,539	1,029.66
Hawaiian Department.....	14,442	1,627.08	15,198	1,712.26
Canal Zone, Panama.....	6,516	1,103.85	7,603	1,287.99
China.....	1,244	902.76	1,019	739.43
Alaska.....	798	1,013.98	832	1,057.13
Total.....	113,524	1,115.85	131,854	1,296.02

DENTAL CARIES—NUMBER OF TEETH TREATED.

	White troops.		Colored troops.		Philippine Scouts.		Total.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
United States (continental) excluding Alaska.....	41,043	637.81	740	303.40	.....	.....	41,783	625.09
Philippine Department.....	7,919	709.65	667	497.39	2,117	384.56	10,703	594.45
Hawaiian Department.....	7,510	1,070.87	1,841	988.19	.....	.....	9,351	1,053.82
Canal Zone, Panama.....	3,669	621.55	.....	.....	.....	.....	3,669	621.55
China.....	764	554.43	.....	.....	.....	.....	764	554.43
Alaska.....	592	752.22	.....	.....	.....	.....	592	752.22
Total.....	61,497	678.85	3,248	575.58	2,117	384.56	66,862	657.29

While the tabulation above given does not portray the character of the work performed, which has been varied, yet it indicates either that the dental work of the past years has placed the teeth of those treated in such condition as not to warrant treatment this year, or that the condition of the teeth of new recruits are closely watched with a view to eliminating those not meeting the requirement in this respect. It is to be noted that the troops serving in the Canal Zone have next to the highest admission rate for dental treatment, the Hawaiian Department leading.

RECRUITING.

AMERICAN TROOPS.

The movement of recruits is shown in Table No. 48. There were 37,993 examined by medical officers, as compared with 57,244 for the year 1914. Of each 1,000 examined, 125.84 were rejected and 21.08 declined enlistment, as compared with 106.60 and 24.46, respectively, for 1914. Of each 1,000 examined by medical officers, 853.08 were accepted, as compared with 868.94 for 1914. Of the number examined and enlisted, 494.91 per 1,000 were original enlistments and 358.17 reenlistments, as compared with 502.62 and 366.32 for 1914.

TABLE NO. 48.—*Movement of recruits, white and colored, 1915.*

	White.		Colored.		Total.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Examined by medical officers.....	35,533	1,000.00	2,460	1,000.00	37,993	1,000.00
Accepted by medical officers.....	30,271	851.91	2,140	869.92	32,411	853.08
By first enlistment.....	17,756	499.70	1,047	425.61	18,803	494.91
By all other enlistments.....	12,515	352.21	1,093	444.31	13,608	358.17
Rejected by medical officers.....	4,496	125.53	285	115.85	4,781	125.84
Declined.....	766	21.56	35	14.23	801	21.08

TABLE NO. 49.—*Nativities of accepted recruits, white and colored, year 1915.*

	Accepted recruits, 1915.			
	Total accepted.		Accepted first enlistment.	
	Number.	Ratio per 1,000 of total accepted.	Number.	Ratio per 1,000 of total accepted.
United States:				
White.....	26,009	802.47	15,408	819.44
Colored.....	2,140	66.02	1,047	55.68
Total native born.....	28,149	868.50	16,455	875.13
Russia.....	863	26.63	582	30.95
Germany.....	686	21.17	272	14.46
Austria.....	642	19.81	426	22.65
Ireland.....	483	14.90	179	9.52
Italy.....	229	7.07	170	9.04
England.....	216	6.66	85	4.52
Norway and Sweden.....	193	5.95	90	4.79
Hungary.....	175	5.40	102	5.42
Canada.....	170	5.25	67	3.56
Denmark.....	157	4.84	107	5.69
Switzerland.....	62	1.91	27	1.44
Scotland.....	48	1.48	21	1.12
Holland.....	47	1.45	26	1.38
Roumania.....	44	1.36	29	1.54
Turkey.....	43	1.33	31	1.65
Greece.....	41	1.26	32	1.70
France.....	28	.86	10	.53
West Indies.....	25	.77	14	.74
Belgium.....	21	.65	17	.90
Australia.....	14	.43	9	.48
South America.....	14	.43	12	.64
Spain.....	10	.31	6	.32
Others.....	51	1.57	34	1.81
Total foreign born.....	4,262	131.50	2,348	124.87
Grand total.....	32,411	1,000.00	18,803	1,000.00

TABLE NO. 50.—*Ages of recruits, white and colored, and the proportion at each age, year 1915, per 1,000 accepted.*

55

The proportion of accepted recruits, 24 years of age and under, was 565.39 per 1,000 as compared with 544.78 in 1914. The greatest number was enlisted at 21 years of age, 5,275, and 3,440 at 22 years; the two ages combined giving 284.38 per 1,000 of all enlistments in the year.

TABLE NO. 51.—*Relation of height to age.*

ABSOLUTE NUMBERS—WHITE RECRUITS, 1915.

Height.	Age.									Total.
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	
5 feet 1 inch and under.....						1			3	4
5 feet 2 inches.....				1	1				3	3
5 feet 3 inches.....	14	11	6	26	17	9	16	15	65	179
5 feet 4 inches.....	115	96	45	270	196	132	153	109	601	1,699
5 feet 5 inches.....	268	180	100	493	349	207	251	196	1,125	3,168
5 feet 6 inches.....	304	242	129	731	470	282	349	293	1,611	4,401
5 feet 7 inches.....	351	244	164	898	545	304	373	337	1,853	5,088
5 feet 8 inches.....	287	225	139	961	610	393	434	329	1,798	5,178
5 feet 9 inches.....	238	164	92	729	486	252	355	310	1,502	4,138
5 feet 10 inches.....	131	120	72	551	371	214	258	223	1,057	2,997
5 feet 11 inches.....	63	58	32	331	196	128	147	130	592	1,677
6 feet.....	47	30	26	203	130	74	86	96	477	1,189
6 feet 1 inch.....	14	7	10	57	48	30	42	35	147	398
6 feet 2 inches and over.....	4	6	9	35	21	13	20	16	93	218
Total.....	1,836	1,376	824	5,275	3,440	2,039	2,464	2,089	10,990	30,371

TABLE No. 51.—*Relation of height to age*—Continued.

PROPORTIONAL NUMBERS—WHITE RECRUITS, 1915.

[illegible]

TABLE No. 52.—Relation of height to age.

ABSOLUTE NUMBERS—COLORED RECRUITS, 1915.

Height.	Age.									Total.
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	
5 feet 2 inches.....					1				1	2
5 feet 3 inches.....						1	1		3	5
5 feet 4 inches.....	4	6	1	9	14	12	12	12	53	123
5 feet 5 inches.....	8	9	6	33	30	17	22	22	101	248
5 feet 6 inches.....	15	11	14	41	43	32	36	28	145	365
5 feet 7 inches.....	12	14	9	45	44	35	27	29	164	379
5 feet 8 inches.....	7	9	7	47	46	39	45	28	146	374
5 feet 9 inches.....	9	10	3	29	27	19	24	13	118	252
5 feet 10 inches.....	5	5	1	22	27	17	18	13	83	191
5 feet 11 inches.....	1	1	1	15	10	10	9	7	55	109
6 feet.....	1	1		5	10	5	8	7	30	67
6 feet 1 inch.....				1	1		7	3	6	18
6 feet 2 inches and over.....				1	1	1	3		1	7
Total.....	62	66	42	248	254	188	212	162	906	2,140

PROPORTIONAL NUMBERS—COLORED RECRUITS, 1915.

[illegible]

From a comparison of the above tables it will be noted that 52.00 per cent of the white recruits were 5 feet 8 inches or over, and 0.64 per cent were under the minimum height, as compared with 49.44 and 1.25, respectively, for the year 1914.

For colored recruits 47.57 were 5 feet 8 inches or over and 6.07 per cent were under the minimum height as compared with 45.85 and 0.98 per cent last year.

The average height for recruits was 5 feet 7.62 inches, as compared with 5 feet 7.56 inches for last year.

TABLE No. 53.—*Relation of weight to age.*

ABSOLUTE NUMBERS—WHITE RECRUITS, 1915.

Weight.	Age.									Total.
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	
119 pounds and under.....	12	7	8	18	15	13	16	14	95	198
120 to 124 pounds....	238	171	73	298	178	102	107	79	378	1,624
125 to 129 pounds....	354	231	128	607	328	171	216	160	736	2,940
130 to 134 pounds....	339	263	130	706	443	260	264	203	1,021	3,630
135 to 139 pounds....	272	252	144	844	477	310	323	268	1,311	4,201
140 to 144 pounds....	227	156	107	815	529	293	349	297	1,234	4,007
145 to 149 pounds....	174	107	65	648	469	269	345	278	1,287	3,642
150 to 154 pounds....	99	80	61	494	347	217	246	249	1,145	2,938
155 to 159 pounds....	56	41	49	325	252	152	206	177	894	2,152
160 to 164 pounds....	31	26	24	229	166	95	142	101	763	1,578
165 to 169 pounds....	22	18	15	127	93	70	93	96	529	1,063
170 to 174 pounds....	7	8	9	84	55	35	54	63	415	730
175 to 179 pounds....	.....	7	7	33	41	17	49	38	204	486
180 pounds and over.	5	8	4	47	47	35	53	56	828	1,063
Total.....	1,836	1,375	824	5,275	3,440	2,039	2,464	2,088	10,930	30,271

PROPORTIONAL NUMBERS—WHITE RECRUITS, 1915.

[illegible]

TABLE No. 54.—*Relation of weight to age.*
ABSOLUTE NUMBER—COLORED RECRUITS, 1915.

Weight.	Age.									Total.
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	
119 pounds and under.....									2	2
120 to 124 pounds....	6	7	4	5	8	2	9	6	17	64
125 to 129 pounds....	7	13	4	23	22	13	6	7	43	138
130 to 134 pounds....	12	9	8	38	25	14	21	16	71	214
135 to 139 pounds....	11	9	7	36	32	23	23	14	100	255
140 to 144 pounds....	12	5	7	38	45	35	37	23	125	327
145 to 149 pounds....	5	6	4	37	31	26	31	25	108	273
150 to 154 pounds....	5	10	4	20	26	28	26	23	126	263
155 to 159 pounds....	2	5	2	17	21	17	20	19	68	171
160 to 164 pounds....	2	1	2	13	18	12	9	9	77	143
165 to 169 pounds....				5	12	6	8	13	52	96
170 to 174 pounds....				9	9	8	6	2	31	65
175 to 179 pounds....		1		3	1	3	6	3	29	46
180 pounds and over.....				4	4	1	10	2	57	78
Total.....	62	66	42	248	254	188	212	162	906	2,140

PROPORTIONAL NUMBERS—COLORED RECRUITS, 1915.

119 pounds and under.....									2.21	0.93
120 to 124 pounds....	96.77	106.06	95.24	20.16	31.50	10.64	42.45	37.04	18.76	29.91
125 to 129 pounds....	112.91	196.97	95.24	92.74	86.61	69.15	28.30	43.21	47.46	64.49
130 to 134 pounds....	193.55	136.36	190.48	153.23	98.42	74.47	99.06	98.76	78.36	100.00
135 to 139 pounds....	177.42	136.36	166.67	145.16	125.98	122.34	108.49	86.42	110.37	119.15
140 to 144 pounds....	193.55	75.76	166.67	153.23	177.17	186.17	174.53	141.97	137.97	152.80
145 to 149 pounds....	80.65	90.91	95.24	149.20	122.05	138.30	146.23	154.32	119.20	127.57
150 to 154 pounds....	80.65	151.52	95.24	80.65	102.36	148.94	122.64	141.97	139.07	125.23
155 to 159 pounds....	32.26	75.76	47.62	68.55	82.68	90.42	94.34	117.28	75.05	79.91
160 to 164 pounds....	32.26	15.15	47.62	52.42	70.87	63.83	42.45	55.56	84.99	66.82
165 to 169 pounds....				20.16	47.24	31.91	37.74	80.24	57.39	44.86
170 to 174 pounds....				36.29	35.43	42.55	28.30	12.35	34.22	30.37
175 to 179 pounds....		15.15		12.10	3.94	15.96	28.30	18.52	32.01	21.50
180 pounds and over.....				16.13	15.75	5.32	47.17	12.35	62.91	36.45
Total.....	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

The average weight of all recruits was 138.56; of the white troops 72.28 per cent were 135 pounds or over, and 0.65 per cent weighed less than the minimum, 120 pounds, as compared with 57.74 and 1.60 for 1914.

Of the colored troops 70.46 per cent weighed 135 pounds or over, while but .09 per cent weighed less than the minimum, 120 pounds, as compared with 66.55 and 1.09 for 1914.

The chest measurements of 43.04 per cent of the white recruits was 34 inches and over, and 2.81 per cent were 30 inches and under, as compared with 40.94 and 8.82 for 1914.

The chest measurements for colored recruits show 21.73 per cent were 34 inches and over, and 3.32 per cent were 30 inches and under, as compared with 39.30 and 8.02, respectively, for 1914.

TABLE No. 57.—*Causes of rejection, by medical officers of the Army, of candidates examined for enlistment, 1915.*

Causes of rejection.	Total.		White.						Colored.	
	Num-ber.	Ratio.	Native born.		Foreign born.		Total.		Num-ber.	Ratio.
			Num-ber.	Ratio.	Num-ber.	Ratio.	Num-ber.	Ratio.		
Venereal diseases.....	623	130.31	461	123.06	44	58.67	505	112.32	118	414.04
Heart disease.....	375	78.44	310	82.75	46	61.33	356	79.18	19	66.67
Diseases of the ear, including defects of hearing.....	349	73.00	297	79.28	38	50.67	335	74.51	14	49.12
Diseases of the eye, including defects of vision.....	280	58.57	239	63.80	36	48.00	275	61.17	5	17.54
Flat feet.....	230	48.11	187	49.92	33	44.00	220	48.93	10	35.09
Alcoholism.....	197	41.20	179	47.78	17	22.67	196	43.59	1	3.51
Diseases of the organs of locomotion, except spinal curvature.....	184	38.49	150	40.04	24	32.00	174	38.70	10	35.09
Hernia.....	139	29.07	118	31.50	14	18.67	132	29.36	7	24.56
Diseases of the skin.....	116	24.26	92	24.56	18	24.00	110	24.47	6	21.05
Under weight.....	115	24.05	88	23.49	21	28.00	109	24.24	6	21.05
Diseases of the respiratory system.....	104	21.75	79	21.09	23	30.67	102	22.69	2	7.02
Defective teeth.....	99	20.71	83	22.16	12	16.00	95	21.13	4	14.04
Weakness of mind.....	97	20.29	64	17.08	28	37.33	92	20.46	5	17.54
Defects of development.....	88	18.41	79	21.09	6	8.00	85	18.91	3	10.53
Diseases of the genito-urinary system, nonvenereal.....	83	17.36	74	19.75	7	9.33	81	18.02	2	7.02
Varicose veins.....	60	12.55	45	12.01	12	16.00	57	12.68	3	10.53
Diseases of the nervous system, except as shown in detail....	59	12.34	57	15.22	2	2.67	59	13.12	.....	.....
General diseases, except as shown in detail.....	55	11.50	50	13.35	5	6.67	55	12.23	.....	.....
Tuberculosis.....	51	10.67	45	12.01	3	4.00	48	10.68	3	10.53
Varicocele.....	32	6.69	28	7.47	2	2.67	30	6.67	2	7.02
Chest development insufficient	30	6.27	25	6.67	5	6.67	30	6.67	.....	.....
Diseases of the digestive system, except as shown in detail.....	29	6.07	28	7.47	1	1.33	29	6.45	.....	.....
Physical debility.....	26	5.40	24	6.41	1	1.33	25	5.56	1	3.51
Curvature of the spine.....	24	5.02	20	5.34	4	5.33	24	5.34	.....	.....
Over weight and obesity.....	21	4.39	17	4.54	1	1.33	18	4.00	3	10.53
Hemorrhoids.....	15	3.14	15	4.00	.....	.....	15	3.34	.....	.....
Under height.....	14	2.93	12	3.20	1	1.33	13	2.89	1	3.51
Diseases of the circulatory system, except as shown in detail.....	5	1.05	5	1.33	.....	.....	5	1.11	.....	.....
Injuries.....	138	28.86	117	31.23	11	14.67	128	28.47	10	35.09
Rejected for causes physical and mental.....	3,638	760.93	2,988	797.65	415	553.33	3,403	756.90	235	824.56
Rejected for causes not physical	1,143	239.07	758	202.35	335	446.67	1,093	243.10	50	175.44
Total rejected.....	4,781	1,000.00	3,746	1,000.00	750	1,000.00	4,496	1,000.00	285	1,000.00

Venereal diseases caused the greatest number of rejections this year, as in 1914, 1912, and 1911. It occupied only third place in 1913. This cause of rejection for whites gave a rate of 130.31 per 1,000, and for colored, 414.04, as compared with 107.92 and 353.25, respectively, in 1914.

TABLE No. 58.—Principal occupations of recruits, first enlistment, 1915.

Occupation.	Number in each case.			Occupation.	Number in each case.		
	Total.	White.	Colored.		Total.	White.	Colored.
Laborers.....	5,865	5,294	571	Plasterers.....	27	23	4
Farmers.....	2,548	2,471	77	Agents.....	26	26	.....
Clerks.....	1,285	1,280	5	Glass workers.....	25	25	.....
Drivers.....	913	871	42	Cement workers.....	22	21	1
Machinists.....	575	567	8	Inspectors.....	21	20	1
Carpenters.....	431	417	14	Packers.....	19	19	.....
Miners.....	389	372	17	Photographers.....	18	17	1
Chauffeurs.....	383	353	30	Coopers.....	18	18	.....
Cooks.....	369	317	52	Dairymen.....	18	18	.....
Electricians.....	360	356	4	Conductors.....	17	17	.....
Painters.....	352	349	3	Florists.....	17	17	.....
Firemen.....	349	339	10	Moving-picture operators.....	17	17	.....
Plumbers.....	253	251	2	Tobacco workers.....	16	16	.....
Mechanics.....	242	240	2	Merchants.....	16	16	.....
Musicians.....	236	224	12	Laundrymen.....	15	15	.....
Salesmen.....	234	234	.....	Foremen.....	15	15	.....
Printers.....	233	231	2	Oilers.....	15	15	.....
Barbers.....	213	202	11	Gardeners.....	14	14	.....
Tailors.....	209	193	16	Upholsterers.....	13	13	.....
Waiters.....	207	166	41	Broom makers.....	13	13	.....
Bakers.....	188	185	3	Hatters.....	12	12	.....
Metal workers.....	177	177	.....	Roofers.....	12	12	.....
Engineers.....	170	168	2	Bridge workers.....	12	12	.....
Telegraphers.....	146	146	.....	Confectioners.....	11	11	.....
Railroad hands.....	145	138	7	Actors.....	11	10	1
Blacksmiths.....	144	138	6	Box makers.....	11	11	.....
Sailors.....	136	124	12	Designers.....	10	10	.....
Shoemakers.....	132	126	6	Watchmen.....	10	10	.....
Butchers.....	117	117	.....	Core makers.....	9	9	.....
Porters.....	96	35	61	Rubber workers.....	8	8	.....
Students.....	92	91	1	Fishermen.....	8	7	1
Weavers.....	86	86	.....	Undertakers.....	8	7	1
Millworkers.....	77	77	.....	Knitters.....	6	6	.....
Linemen.....	74	74	.....	Dentists.....	6	6	.....
Masons.....	71	67	4	Lawyers.....	6	6	.....
Tinners.....	68	67	1	Cranemen.....	5	5	.....
Molders.....	64	61	3	Wheelwrights.....	5	5	.....
Druggists.....	64	63	1	Chemists.....	5	5	.....
Lumbermen.....	63	59	4	Bartenders.....	4	4	.....
Nurses.....	56	56	.....	Locksmiths.....	4	4	.....
Boiler makers.....	50	49	1	Furriers.....	3	3	.....
Jewelers.....	42	42	.....	Aviators.....	3	3	.....
Civil engineers and surveyors.....	42	42	.....	Lithographers.....	3	3	.....
Stenographers.....	37	37	.....	Button makers.....	2	2	.....
Motormen.....	37	37	.....	Dyers.....	2	2	.....
Teachers.....	36	35	1	Embroiderers.....	1	1	.....
Draftsmen.....	34	34	.....	Miscellaneous.....	115	110	5
Leather workers.....	31	31	.....			
Paper workers.....	28	28	.....	Total.....	18,803	17,756	1,047

PHILLIPINE SCOUTS.

The proportion of Filipinos accepted to all of those examined by medical officers in the year 1915 was 80.46 per cent, as compared with 90.88 in 1914. The total number examined was 1,090 in 1915, and 3,521 in 1914.

TABLE No. 59.—Examination of Philippine applicants for enlistment, year 1915.

	Number.	Ratio per 1,000 examined.
Examined by medical officers.....	1,090	1,090.00
Accepted by medical officers.....	877	804.59
By first enlistment.....	254	234.77
Other enlistments.....	623	579.82
Rejected by medical officers.....	198	179.82
Declined.....	17	15.69

TABLE No. 60.—*Philippine recruits (accepted).*

	Number.	Ratio.		Number.	Ratio.
18 years and under.....	21	23.95	31 years.....	38	43.33
19 years.....	5	5.70	32 years.....	41	46.75
20 years.....	11	12.54	33 years.....	27	30.79
21 years.....	140	159.64	34 years.....	22	25.09
22 years.....	69	78.68	35 years.....	17	19.33
23 years.....	48	54.73	36 years.....	8	9.12
24 years.....	92	104.90	37 years.....	7	7.98
25 years.....	53	60.44	38 years.....	11	12.54
26 years.....	28	31.93	39 years.....	7	7.98
27 years.....	57	65.00	40 years and over.....	18	20.52
28 years.....	67	76.40	Total.....	877	1,000.00
29 years.....	47	53.59			
30 years.....	43	49.03			

TABLE No. 61.—*Philippine recruits—Relation of height to age.*

ABSOLUTE NUMBERS, 1915.

Height.	Age.									
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	Total.
4 feet 11 inches and under.....				3		1	2	1	2	9
5 feet.....	3			10	1	2	2	1	17	36
5 feet 1 inch.....	1		4	18	8	4	8	1	26	70
5 feet 2 inches.....	3	1		30	12	8	15	3	51	123
5 feet 3 inches.....	5	2	2	22	11	7	19	10	84	162
5 feet 4 inches.....	4	1	1	16	12	9	17	9	93	162
5 feet 5 inches.....	2		2	23	5	3	11	7	59	112
5 feet 6 inches.....	1	1	1	7	6	7	8	13	46	90
5 feet 7 inches.....	1		1	5	7	4	5	4	25	52
5 feet 8 inches.....				3	3	1	2	2	21	32
5 feet 9 inches.....				2	1	1	2	1	7	14
5 feet 10 inches.....	1				1	1		1	3	7
5 feet 11 inches and over.....				1	2		1		4	8
Total.....	21	5	11	140	69	48	92	53	438	877

PROPORTIONAL NUMBERS, 1915.

4 feet 11 inches and under.....				21.43		20.83	21.74	18.87	4.57	10.26
5 feet.....	142.86			71.43	14.49	41.67	21.74	18.87	38.81	41.05
5 feet 1 inch.....	47.62		363.64	128.57	115.94	83.33	86.96	18.87	59.36	79.82
5 feet 2 inches.....	142.86	200.00		214.29	173.91	166.67	163.04	56.60	116.44	140.26
5 feet 3 inches.....	238.10	400.00	181.82	157.14	159.42	145.83	206.52	188.68	191.80	184.72
5 feet 4 inches.....	190.48	200.00	90.91	114.29	173.91	187.50	184.78	169.81	212.33	184.72
5 feet 5 inches.....	95.24		181.82	164.29	72.47	62.50	119.57	132.08	134.70	127.71
5 feet 6 inches.....	47.62	200.00	90.91	50.00	86.96	145.83	86.96	245.28	105.02	102.62
5 feet 7 inches.....	47.62		90.91	35.71	101.45	83.33	54.35	75.47	57.08	59.20
5 feet 8 inches.....				21.43	43.48	20.83	21.74	37.74	47.95	36.40
5 feet 9 inches.....				14.29	14.49	20.83	21.74	18.87	15.98	15.96
5 feet 10 inches.....	47.62				14.49	20.83		18.87	6.85	7.98
5 feet 11 inches and over.....				7.14	28.99		10.87		9.13	9.12
Total.....	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

Of all recruits accepted, 45.61 per cent were below the minimum standard for American soldiers, 5 feet 4 inches, while only 6.95 per cent were above the average height of American recruits, 5 feet 7 inches.

TABLE No. 62.—*Philippine recruits—Relation of weight to age.*
ABSOLUTE NUMBERS, 1915.

Weight.	Age.									Total.
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	
99 pounds and under	1			4		1		1	9	16
100 to 104 pounds	3		2	27	7	3	9	6	29	88
105 to 109 pounds	6		1	28	7	9	12	4	48	115
110 to 114 pounds	4	2	4	24	21	12	21	6	65	159
115 to 119 pounds	3	1	2	22	10	10	19	8	83	158
120 to 124 pounds	1	2		16	7	3	12	6	63	110
125 to 129 pounds			1	10	10	5	11	7	54	98
130 to 134 pounds	2			5	4	1	6	6	36	60
135 to 139 pounds	1		1	2	1	1	1	3	24	34
140 to 144 pounds				1	2	2	1	3	13	22
145 to 149 pounds				1				1	4	6
150 to 154 pounds						1		2	3	6
155 to 159 pounds									3	3
160 pounds and over									4	4
Total	21	5	11	140	69	48	92	53	438	877

PROPORTIONAL NUMBERS, 1915.

99 pounds and under	47.62			28.57		20.83		18.87	20.55	18.24
100 to 104 pounds	142.86		181.82	192.86	101.45	62.50	97.83	113.21	66.21	98.06
105 to 109 pounds	285.72		90.91	200.00	101.45	187.50	130.44	75.47	109.59	131.13
110 to 114 pounds	190.48	400.00	363.64	171.43	304.35	250.00	228.26	113.21	148.40	181.30
115 to 119 pounds	142.86	200.00	181.82	157.14	144.93	208.33	206.52	150.94	199.51	190.16
120 to 124 pounds	47.62	400.00		114.29	101.45	62.50	130.44	113.21	143.84	125.43
125 to 129 pounds			90.91	71.43	144.93	104.17	119.57	132.08	123.29	111.74
130 to 134 pounds	95.24			35.71	57.97	20.83	65.22	113.21	82.19	68.42
135 to 139 pounds	47.62		90.91	14.29	14.49	20.83	10.87	56.60	54.80	38.77
140 to 144 pounds				7.14	28.99	41.67	10.87	56.60	29.68	25.00
145 to 149 pounds				7.14				18.87	9.13	6.84
150 to 154 pounds						20.83		37.74	6.85	6.84
155 to 159 pounds									6.85	3.42
160 pounds and over									9.13	4.56
Total	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

The weight of 60.89 per cent of all recruits is less than 120 pounds, the minimum standard for American recruits. Only 4.67 per cent were of the average weight or over for American recruits.

TABLE No. 63.—*Philippine recruits—Relation of chest measurement to age.*
ABSOLUTE NUMBERS, 1915.

Chest measurement.	Age.									Total.
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	
27 inches				1		1				2
28 inches				3	1		1	1	3	6
29 inches	5		1	11	3	2	4	5	16	40
30 inches	5		1	28	8	5	15	8	58	126
31 inches	5	4	5	41	19	18	28	7	98	225
32 inches	4	1	2	35	24	6	27	17	117	223
33 inches	2		2	17	10	9	12	4	87	143
34 inches				1	3	5	4	9	34	56
35 inches				3	1	1	1	2	12	20
36 inches and over						1			11	12
Total	21	5	11	140	69	48	92	53	438	877

TABLE No. 63.—*Philippine recruits—Relation of chest measurement to age—Continued.*
PROPORTIONAL NUMBERS, 1915.

Chest measurement.	Age.									Total.
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	
27 inches.....				7.14		20.83				2.28
28 inches.....				21.43	14.49		10.87	18.87	6.85	10.26
29 inches.....	238.10		90.91	78.57	43.48	41.67	43.48	94.34	41.10	55.87
30 inches.....	238.10		90.91	200.00	115.94	104.17	163.04	150.94	132.42	145.96
31 inches.....	238.10	800.00	454.55	292.86	275.36	375.00	304.35	132.08	223.74	256.56
32 inches.....	150.48	200.00	181.82	250.00	347.83	125.00	293.48	320.75	267.13	265.68
33 inches.....	95.24		181.82	121.43	144.93	187.50	130.44	75.47	198.63	163.06
34 inches.....				7.14	43.48	104.17	43.48	160.81	77.63	63.86
35 inches.....				21.43	14.49	20.83	10.87	37.74	27.40	22.81
36 inches and over.....						20.83			25.11	13.68
Total.....	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

The minimum standard chest measurement for American recruits is 32 inches at expiration. Forty-seven and nine hundredths of 1 per cent of all Philippine recruits have a chest measurement below the standard.

Table No. 64 gives the cause of rejection among 1,090 Filipino applicants for enlistment, examined by medical officers during the year.

TABLE No. 64.—*Causes of rejection of Philippine applicants for enlistment, 1915.*

Causes of rejection.	Total.		Causes of rejection.	Total.	
	Number.	Ratio per 1,000 rejected for all causes.		Number.	Ratio per 1,000 rejected for all causes.
Heart disease.....	41	209.18	Hernia.....	3	15.31
Underweight.....	22	112.26	Underheight.....	3	15.31
Diseases of the eye, including defects of vision.....	19	96.94	Diseases of the digestive system.....	2	10.20
Tuberculosis.....	17	86.74	Chest development insufficient.....	2	10.20
Genito-urinary system, non-venereal.....	15	76.54	Flat feet.....	2	10.20
General diseases except as mentioned in detail.....	11	56.10	Varicose veins.....	1	5.10
Defective teeth.....	9	45.92	Defects of development except as shown in detail.....	1	5.10
Diseases of the ear including defects of hearing.....	8	40.82	Injuries.....	2	10.20
Diseases of the respiratory system.....	7	35.72	Rejected for causes physical and mental.....	177	903.06
Venereal diseases.....	4	20.41	Rejected for causes not physical.....	19	96.94
Diseases of the skin.....	4	20.41	Total rejected.....	196	1,000.00
Diseases of the organs of locomotion.....	4	20.41			

Heart disease caused 20.92 per cent of all rejections by medical officers; diseases of the eye, including defects of vision, 9.69 per cent; tuberculosis, 8.67 per cent, genito-urinary system, nonvenereal, 7.65 per cent, and general diseases, except as mentioned in detail, 5.61 per cent. Venereal disease, which last year caused 5.67 per cent of all rejections, in 1915 caused 2.04. Twenty-two applicants were rejected because of underweight, a total of 11.22 per cent of all

rejections, while but 2, or 1.02 per cent, were found to have insufficient chest development.

PORTO RICAN TROOPS.

Ninety and three one-hundredths per cent of the recruits examined by medical officers, for the Porto Rican Regiment, were accepted, as compared with 91.44 per cent in 1914. Two hundred and seventy-one applicants were examined, and 244 accepted, of which number only 47 were first enlistments. Of the causes of rejection, 37.03 per cent were for underweight; 14.81 for venereal diseases, 7.47 for underheight, and 3.70 for insufficient chest development.

In height 51.64 per cent were 66 inches or under and only 6.56 per cent attained the height of 69 inches. Sixty-eight and eighty-five one hundredths were under the average height of American recruits; 38.52 per cent weighed less than 130 pounds, and 31, or 13.92 per cent, weighed over 150 pounds. Seventy-one and thirty-one one hundredths per cent had a chest measurement of 33 inches or under, and 10.06 had a chest measurement of 35 inches and over, as compared with 13.45 per cent last year.

Applicants.	Number.	Ratio per 1,000 exam- ined.
Examined by medical officers.....	271	1,000.00
Accepted by medical officers.....	244	900.37
By first enlistment.....	47	173.43
Other enlistments.....	197	726.94
Rejected by medical officers.....	27	99.63
Declined.....		

TABLE NO. 65.—Causes of rejection of applicants for enlistment, Porto Rican regiment, 1915.

Causes of rejection.	Total.		Causes of rejection.	Total.	
	Number.	Ratio per 1,000 rejected for all causes.		Number.	Ratio per 1,000 rejected for all causes.
Underweight.....	10	370.37	Hernia.....	1	37.04
Venereal diseases.....	4	148.15	Chest development insuf- ficient.....	1	37.04
Diseases of the eye.....	2	74.07	Defects of development, other.....	1	37.04
Defective teeth.....	2	74.07	Flat feet.....	1	37.04
Underheight.....	2	74.07			
Varicose veins.....	1	37.04			
Heart disease.....	1	37.04			
Tuberculosis.....	1	37.04	Total rejected for phys- ical disability.....	27	1,000.0

FINANCIAL STATEMENT, 1916.¹

Medical and Hospital Department, 1916.

Appropriated by act approved Mar. 4, 1915.....	\$750, 000. 00
Appropriated by act approved Mar. 31, 1916.....	37, 500. 00
Refundments during the year.....	280. 33

Total to be accounted for.....	787, 780. 33
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Disbursed during the year:

Expenses of medical supply depots.....	\$836. 87	
Medical and hospital supplies.....	429, 836. 17	
Medical attendance and medicines (except at recruiting stations).....	10, 880. 57	
Medical expenses of recruiting (including medical attendance and medicines at recruiting stations).....	4, 719. 81	
Pay of employees.....	148, 850. 73	
Hospital laundry.....	45, 038. 53	
Expressage.....	476. 36	
Gas and electricity for laboratory apparatus.....	3, 101. 51	
Customs duties and internal revenue taxes on medical supplies.....	5, 042. 26	
Miscellaneous.....	86. 64	
	648, 869. 45	

Balances on hand June 30, 1916:

In United States Treasury.....	68, 779. 47	
In transit from disbursing officers to the Treasury.....	1, 748. 09	
In hands of disbursing officers.....	68, 383. 32	
	138, 910. 88	

Total accounted for.....	787, 780. 33
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Medical and Hospital Department, 1915.

Balances on hand July 1, 1915, act Apr. 27, 1914.....	131, 500. 02
Refundments during the year.....	5. 03

Total to be accounted for.....	131, 505. 05
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Disbursed during the year:

Expenses of medical supply depots.....	\$246. 74	
Medical and hospital supplies.....	111, 965. 29	
Medical attendance and medicines (except at recruiting stations).....	2, 564. 72	
Medical expenses of recruiting (including medical attendance and medicines at recruiting stations).....	508. 30	
Pay of employees.....	2, 572. 82	
Hospital laundry.....	6, 189. 43	
Expressage.....	9. 33	
Gas and electricity for laboratory apparatus.....	400. 32	
Miscellaneous.....	17. 27	
	124, 474. 22	

Treasury transfers to "Medical and Hospital Department, 1916," to correct erroneous payments therefrom.....	265. 43
Balance on hand June 30, 1916, in United States Treasury.....	6, 765. 40

Total accounted for.....	131, 505. 05
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¹ The disbursements in this statement include settlements with public creditors made by the accounting officers of the Treasury and charged to these appropriations.

Medical and Hospital Department, 1914.

Balance on hand July 1, 1915, acts Mar. 2, 1913, and May 25, 1914.....	\$6, 276. 86
Disbursed during the year:	
Medical and hospital supplies.....	\$23. 78
Medical attendance and medicines (except at recruiting stations).....	21. 00
Medical expenses of recruiting.....	8. 00
	<u>52. 78</u>
Carried to surplus fund.....	6, 224. 08

Medical and Hospital Department, certified claims.

Appropriated by act approved Feb. 28, 1916.....	13. 60
Disbursed during the year.....	13. 60

Medical and Hospital Department, expired appropriations.

Refundment during the year.....	47. 90
Carried to surplus fund.....	47. 90

Replacing medical supplies, 1916-17.

[Act June 12, 1906, 34 Stats., 256.]

Amounts accruing to this fund during the year:	
On account of supplies transferred to other branches of the Government.....	71, 309. 89
On account of supplies sold.....	32, 296. 88
On account of collections for medical supplies lost or destroyed...	526. 59
Treasury transfer from "Replacing medical supplies, 1915-16," to correct erroneous deposit.....	18. 62
Total to be accounted for.....	<u>104, 151. 98</u>
Disbursed during the year for medical and hospital supplies.....	6, 732. 93
Treasury settlement to reimburse officer for erroneous (duplicate) deposit.....	12. 75
Balances on hand June 30, 1916:	
In United States Treasury.....	\$79, 139. 23
In hands of disbursing officer.....	18, 267. 07
	<u>97, 406. 30</u>
Total accounted for.....	104, 151. 98

Replacing medical supplies, 1915-16.

Balance on hand July 1, 1915.....	121, 618. 67
Amounts accruing to this fund during the year:	
On account of supplies transferred to other branches of the Government.....	\$14, 324. 49
On account of supplies sold.....	2, 662. 93
On account of collections for medical supplies lost or destroyed.....	336. 13
	<u>17, 323. 55</u>
Total to be accounted for.....	<u>138, 942. 22</u>
Disbursed during the year for medical and hospital supplies.....	39, 499. 62
Treasury transfer to "Replacing medical supplies, 1916-17," to correct erroneous deposit.....	18. 62
Treasury settlement to reimburse officer for erroneous (duplicate) deposit.....	10. 25
Balances on hand June 30, 1916:	
In United States Treasury.....	\$48, 913. 35
In hands of disbursing officer.....	50, 500. 38
	<u>99, 413. 73</u>
Total accounted for.....	138, 942. 22

Replacing medical supplies, 1914-15.

Balance on hand July 1, 1915.....	\$11, 947. 31
Amount accruing to this fund during the year on account of collections for medical supplies lost or destroyed.....	15. 70
Total to be accounted for.....	11, 963. 01
Disbursed during the year for medical and hospital supplies.....	3, 820. 00
Balances on hand June 30, 1916:	
In United States Treasury.....	\$30. 93
In hands of disbursing officer.....	8, 112. 08
	8, 143. 01
Total accounted for.....	11, 963. 01

Replacing medical supplies, 1913-14.

Balance on hand July 1, 1915.....	\$219. 52
Carried to surplus fund.....	219. 52

Hospital care, Canal Zone garrisons, 1916.

Appropriated by act approved Mar. 4, 1915.....	45, 000. 00
Disbursed during the year.....	27, 709. 18
Balances on hand June 30, 1916:	
In United States Treasury.....	\$16, 133. 65
In hands of disbursing officer.....	1, 157. 17
	17, 290. 82

Hospital care, Canal Zone garrisons, 1915.

Balance on hand July 1, 1915, act Mar. 4, 1915.....	45, 000. 00
Disbursed during the year.....	31, 162. 32
Balance on hand June 30, 1916, in United States Treasury.....	13, 837. 68

Library, Surgeon General's Office, 1916.

Appropriated by act approved Mar. 4, 1915.....	10, 000. 00
Disbursed during the year.....	2, 226. 35
Balances on hand June 30, 1916:	
In United States Treasury.....	\$4, 992. 24
In hands of disbursing officer.....	2, 781. 41
	7, 773. 65

Library, Surgeon General's Office, 1915.

Balance on hand July 1, 1915, act Apr. 27, 1914.....	6, 270. 08
Disbursed during the year.....	3, 854. 55
Balances on hand June 30, 1916:	
In United States Treasury.....	\$948. 75
In hands of disbursing officer.....	1, 466. 78
	2, 415. 53

Library, Surgeon General's Office, 1914.

Balance on hand July 1, 1915, act Mar. 2, 1913.....	108. 35
Disbursed during the year.....	52. 29
Carried to surplus fund.....	56. 06

Army Medical Museum, 1916.

Appropriated by act approved Mar. 4, 1915.....	\$5,000.00
Disbursed during the year.....	2,776.10

Balances on hand June 30, 1916:

In United States Treasury.....	\$1,500.00	
In hands of disbursing officer.....	723.90	
		2,223.90

Army Medical Museum, 1915.

Balance on hand July 1, 1915, act Apr. 27, 1914.....	3,224.59
Disbursed during the year.....	763.82

Balances on hand June 30, 1916:

In United States Treasury.....	\$1,918.56	
In hands of disbursing officer.....	542.21	
		2,460.77

Army Medical Museum, 1914.

Balance on hand July 1, 1915, act Mar. 2, 1913.....	1,565.81
Carried to surplus fund.....	1,565.81

Artificial limbs, 1916.

Appropriated by act approved Mar. 3, 1915.....	95,000.00
Disbursed during the year.....	79,674.74

Balances on hand June 30, 1916:

In United States Treasury.....	\$11,817.26	
In hands of disbursing officer.....	3,508.00	
		15,325.26

Artificial limbs, 1915.

Balance on hand July 1, 1915, act Aug. 1, 1914.....	47,363.65
Disbursed during the year.....	1,677.23

Balance on hand June 30, 1916, in United States Treasury.....	45,686.42
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Artificial limbs, 1914.

Balance on hand July 1, 1915, act June 23, 1913.....	11,046.70
Carried to surplus fund.....	11,046.70

Trusses for disabled soldiers, 1916.

Appropriated by act approved Mar. 3, 1915.....	8,000.00
Disbursed during the year.....	1,440.96

Balances on hand June 30, 1916:

In United States Treasury.....	\$1,400.00	
In hands of disbursing officer.....	159.04	
		1,559.04

Trusses for disabled soldiers, 1915.

Balance on hand July 1, 1915, act Aug. 1, 1914.....	1,886.42
Disbursed during the year.....	177.75

Balance on hand June 30, 1916, in United States Treasury.....	1,708.67
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Trusses for disabled soldiers, 1914.

Balance on hand July 1, 1915, act June 23, 1913.....	1,997.58
Carried to surplus fund.....	1,997.58

Appliances for disabled soldiers, 1916.

Appropriated by act approved Mar. 3, 1915.....	\$1,500.00
Disbursed during the year.....	802.24

Balances on hand June 30, 1916:

In United States Treasury.....	\$500.00	
In hands of disbursing officer.....	197.76	
		697.76

Appliances for disabled soldiers, 1915.

Balance on hand July 1, 1915, act Aug. 1, 1914.....	797.11
Disbursed during the year.....	106.26

Balance on hand June 30, 1916, in United States Treasury.....	690.85
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Appliances for disabled soldiers, 1914.

Balance on hand July 1, 1915, act June 23, 1913.....	1,090.01
Carried to surplus fund.....	1,090.01

General summary of all appropriations.

Balances on hand July 1, 1915.....	391,912.68
Appropriated.....	947,013.60
Accrued to replacing funds, act June 12, 1906 (34 Stats., 256).	121,472.61
Refundments during the year.....	67.83
Transfers between appropriations, debits.....	284.05

Total to be accounted for.....	1,460,750.77
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Disbursed during the year.....	975,886.39
Transfers between appropriations, credits.....	284.05
Treasury settlement on account of duplicate deposit.....	23.00
Carried to surplus fund.....	22,247.66
Balances on hand June 30, 1916.....	462,309.67

Total accounted for.....	1,460,750.77
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VITAL STATISTICS.

The following tables show in detail most of the statistical data upon which the statements in this report are based:

66. Surgical operations performed on American troops.

67. Numerical view of the effect of disease and injury on United States troops serving at home and abroad in the year 1915, compared with the corresponding data for the year 1914, by races.

68. Admissions to sick report, discharges and deaths in the Army, with ratios per 1,000 of mean strength, in which all available data for the decade ending December 31, 1914, are placed in comparison with the year 1915.

68½. Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the Army; separately for officers, total enlisted (including American, Porto Rican, and Philippine troops), and grand total, year 1915.

69. Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the Army; officers, total enlisted American troops, and grand total, year 1915.

70. Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the Army, American troops, total enlisted, and separately for white and colored.

70½. Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the United States, continental (excluding Alaska), separately for officers and enlisted men, and the grand total.

71. Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the year 1915, United States, continental (excluding Alaska), total enlisted, white and colored; and separately for the white and colored troops (enlisted) serving therein.
- 71½. Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the officers separately; total enlisted, including Philippine Scouts; and total officers and enlisted men, including Philippine Scouts, serving in the Philippine Islands, for the year 1915.
72. Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for total American troops, enlisted men, white and colored; and separately for white and colored American enlisted men serving in the Philippine Islands, year 1915.
73. Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for American troops serving in Alaska, Panama Canal Zone, and China, officers and enlisted men, for the year 1915.
74. Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for American troops serving in Hawaii, 1915, separately for officers, enlisted men, white, colored, and total.
75. Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for American troops serving on Army transports, officers, and native troops serving in Porto Rico, and for the Philippine Scouts, for year 1915.
76. Admissions to sick report, discharges, deaths, and noneffectiveness expressed in ratios per 1,000 of mean strength, for American troops (enlisted men) serving on duty at home stations placed in comparison with the same data for those serving at distant stations, year 1915.
77. (Foreign table not used this year.)
78. (Foreign table not used this year.)
79. Showing the most important diseases, by departments, in the United States (continental, excluding Alaska), officers and enlisted men, year 1915.
80. Comparative figures, Army, enlisted American troops, 1911-1915.
81. Admissions and cases compared, 1904-1911, inclusive.

TABLE No. 66.—Surgical operations performed by officers of the Medical Corps on officers and enlisted men of the Army during the calendar year 1915.

Operation.	Disease or injury.	Cases.	Result.				Anesthetic.					
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Other general anesthetic.	Local.	None.
	EYE.											
Enucleation.....	Glaucoma.....	2	2					2				
	Phthisis bulbi.....	1	1					1				
	Uveitis.....	2	2					2				
	Rupture of sclera.....	1	1					1				
	Lacerated wound of eye.....	1	1					1				
	Penetrating wound of eye.....	1	1					1				
	Foreign body in eye (bullet). Gunshot wound of head, involving eye.	1	1					1				
		1				1					1	
Suturing of globe.....	Laceration of globe.....	1	1								1	
Suturing.....	Wound of sclera.....	1	1								1	
Extraction..... 1	Cataract, traumatic.....	2	1		1						2	
Combined extraction... 1		2	2								2	
Extraction.....	Cataract.....	2	2								2	
Iridectomy.....	Cataract with adherent iris.	1	1								1	
Keratotomy.....	Anterior synechia.....	1	1								1	
Totl's operation..... 1	Dacryocystitis.....	3	3					1			2	
Dacryocystotomy..... 2		3	3								2	
Resection external rectus..... 1	Strabismus.....	2	2								2	
Tenotomy internal rectus..... 1		2	2								2	
Expression.....	Trachoma.....	3	3								3	
Paracentesis.....	Ulcer of cornea.....	1		1			1					
Removal of granulative area	Granulating area, cornea..	1	1								1	

TABLE NO. 66.—*Surgical operations performed by officers of the Medical Corps on officers and enlisted men of the Army during the calendar year 1915—Continued.*

[illegible]

TABLE No. 66.—Surgical operations performed by officers of the Medical Corps on officers and enlisted men of the Army during the calendar year 1915—Continued.

		NECK AND THROAT—con.									
Excision right lobe.....	2										
Partial excision right lobe.....	1										
Thyroidectomy.....	2	Goutre (2 cystic).....	6	4	2				2		4
Injection of boiling water.....	1										
Excision right lobe and isthmus.....	1										
Excision right, and resection left lobe.....	1										
Ligation superior thyroid artery.....	2	Exophthalmic goutre.....	8	6	2				6		2
Thyroidectomy.....	2										
Excision left lobe, and ligation of left superior and inferior thyroid arteries.....	2										
Thoracotomy and drainage.....	6										
Thoracotomy — Eastlander.....	1										
Costatectomy.....	4	Empyema.....	28	26	2			2	17	1	7
Resection of rib and drainage.....	16										
Iscortication, partial, right lung.....	1										
Thoracotomy and drainage.....		Abscess, acute, right lung.....	1				1				1
Resection eighth rib, post axillary line, with aspiration and drainage.....		Abscess, tuberculous, left upper lobe.....	1		1			1			
Thoracotomy.....	1										
Paracentesis.....	5	Pleurisy.....	16	16				4			12
Aspiration.....	6										
Resection of rib.....	4	Empyema chronic tuberculous.....	1				1	1			
Pneumolysis — Frederick's subperiosteal (resection second to tenth ribs, inclusive).....											
Gastrotomy—Senn's.....		Mediastinal tumor.....	1	1				1			
Thoracoplasty and partial decortication.....		Sinus through lateral chest wall.....	1	1				1			
Incision and drainage..	1										
Laparotomy exploratory.....	1	Gunshot wound, thorax... ..	2	1		1		2			
		ABDOMEN,									
Gastroenterostomy.....	3	Ulcer of stomach.....	5	5				5			
Laparotomy, suture and drainage.....	2	Ulcer of stomach, pyloric, hepatic cirrhosis, and appendicitis.....	2	1		1		2			
Gastroenterostomy and appendectomy.....		Gastralgia severe, following operation for gastroenterostomy (old).....	1		1			1			
Laparotomy; stoma examined, and found patent.....											
Gastroenterostomy	1										
Gastrojejunostomy posterior.....	4	Ulcer of duodenum.....	6	6				5	1		
Laparotomy exploratory.....	1										
Laparotomy.....	1										
Rib resection, transpleural evacuation and drainage.....	1										
Widening sinus to abscess cavity, pleural route.....	1	Abscess of liver.....	12	12				12			
Incision, evacuation, and drainage.....	9										
Cholecystotomy.....		Cholangitis.....	1	1				1			

TABLE No. 66.—Surgical operations performed by officers of the Medical Corps on officers and enlisted men of the Army during the calendar year 1915—Continued.

Operation.	Disease or injury.	Cases.	Result.				Anesthetic.				
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Other general anesthetic.	Local.	None.
ABDOMEN—continued.											
Cholecystectomy, with appendectomy..... 2	Cholecystitis.....	6	5	.....	.....	1	.....	6	.....	.....	.....
Cholecystotomy..... 2											
Cholecystostomy..... 2											
Do.....	Cholecystitis and pericholecystitis, with adhesions.	1	1	.....	.....	.....	.....	1	.....	.....	.....
Cholecystectomy.....	Cholecystitis with adhesions after cholecystostomy.	1	1	.....	.....	.....	.....	1	.....	.....	.....
Cholelithotomy and cholecystostomy..... 1	Cholelithiasis.....	3	3	.....	.....	.....	.....	3	.....	.....	.....
Cholecystotomy..... 1											
Cholelithotomy, cholecystostomy, and excision mucous membrane of gall bladder.. 1											
Laparotomy.....	Hepatolithiasis.....	1	1	.....	.....	.....	.....	1	.....	.....	.....
Removal of stone and gall bladder.	Choledocholithiasis.....	1	1	.....	.....	.....	.....	1	.....	.....	.....
Cholelithotomy and removal of stone from common duct.	Biliary fistula.....	1	1	.....	.....	.....	.....	1	.....	.....	.....
Laparotomy..... 1	Cirrhosis of liver.....	2	2	.....	.....	.....	.....	2	.....	.....	.....
Aspiration peritoneal cavity..... 1											
Laparotomy exploratory... Do.....											
Splenectomy.....	Aneurism abdominal aorta	1	1	.....	.....	.....	.....	1	.....	.....	.....
Laparotomy exploratory... Do.....	Polycythemia.....	1	1	.....	.....	.....	.....	1	.....	.....	.....
Paracentesis.....	Pernicious anemia.....	1	1	.....	.....	.....	.....	1	.....	.....	.....
Talma-Morrison operation.	Peritonitis tuberculous....	2	2	.....	.....	.....	.....	2	.....	.....	.....
Resection ascending colon and ileum..... 1	Suspected abdominal tuberculosis.	1	1	.....	.....	.....	.....	.....	.....	1	.....
Evacuation..... 1	Ascites tuberculous.....	1	1	.....	.....	.....	.....	.....	.....	1	.....
Laparotomy..... 3	Peritonitis.....	5	4	1	.....	.....	.....	5	.....	.....	.....
Division of bands											
Laparotomy exploratory... Do.....											
Division of bands and plication of mesentery..... 1	Membranous pericolicitis...	2	2	.....	.....	.....	.....	2	.....	.....	.....
Plastic..... 1	Constipation, chronic.....	1	.....	1	.....	.....	.....	1	.....	.....	.....
Adhesions freed..... 3	Sclerosis of ileum.....	1	1	.....	.....	.....	.....	1	.....	.....	.....
Release of kink, and repair of bowel..... 1	Lane kink, ileum.....	6	6	.....	.....	.....	.....	6	.....	.....	.....
End to end anastomosis and suture..... 1											
Resection 6 inches of ileum..... 1											
Enterostomy.....	Fecal fistula, due to tuberculous ulceration.	2	.....	.....	2	.....	.....	2	.....	.....	.....
Evacuation of abscess and drainage..... 5	Ulcer of cecum, perforated.	1	1	.....	.....	.....	.....	1	.....	.....	.....
Appendectomy..... 600	Appendicitis (15 cases gangrenous).	611	602	3	.....	6	1	520	19	.....	1
Appendectomy, flushing abdominal cavity and drainage..... 6											
Appendectomy.....											
Excision of fistulous tract and closure.	Routine procedure in abdominal operations.	1	1	.....	.....	.....	.....	1	.....	.....	.....
Incision and drainage.....	Fecal fistula caput ceci after old appendectomy.	1	1	.....	.....	.....	.....	1	.....	.....	.....
Laparotomy exploratory..... 2	Sinus following appendicitis.	1	1	.....	.....	.....	.....	1	.....	.....	.....
Laparotomy and freeing of adhesions..... 11	Adhesions intra-abdominal (8 cases followed the operation of appendectomy).	13	11	2	.....	.....	.....	13	.....	.....	.....
Laparotomy exploratory...											
	Sarcoma abdominal, involving kidney.	1	1	.....	.....	.....	.....	1	.....	.....	.....

TABLE No. 86.—Surgical operations performed by officers of the Medical Corps on officers and enlisted men of the Army during the calendar year 1915—Continued.

Operation.	Disease or injury.	Cases.	Result.				Anesthetic.			
			Successful.	Partially successful.	Failure.	Died.	Chloroform.			
ABDOMEN—continued.										
Intestinal anastomosis, end to side.	Intestinal obstruction acute, due to carcinoma of cecum.	1	1							
Andrews' operation.... 4	Inguinal hernia.....	267	267				7	1		
Bassini's operation ....207										
Bassini's modified operation.... 15										
Ferguson's operation.... 25										
Ferguson's modified operation..... 1										
Halstead's operation.... 3										
Herniotomy, method not stated.... 12										
Removal of sac and suture of peritoneum muscles and fascia.... 1										
Mayo's operation..... 6										
Mayo's modified operation..... 1										
Blake's operation..... 1	Ventral hernia (9 cases followed the operation of appendectomy, and 1 followed supra-pubic prostatectomy).	19	19				2			
Andrews' radical operation..... 1										
Overlapping rectus sheath..... 2										
Repair of hernia, method not stated.... 6										
Excision of scar tissue, and bringing tissues into correct apposition..... 1										
Removal of sac and suturing..... 1										
Bassini's operation..... 2	Femoral hernia.....	3	3							
Excision of scar and suture.	Painful scar after Bassini's operation.	1	1							
Laparotomy exploratory, suture of colon and drainage.	Gunshot wound, abdomen.	1	1							
Laparotomy exploratory, and suture of wounds of liver and stomach.	.....do.....	1				1				
Laparotomy exploratory, with drainage.	.....do.....	1	1							
Abdominal section with suture of perforations of bladder and intestines and resection of 12 inches of ileum.	.....do.....	1				1				
Laparotomy exploratory.....	.....do.....	1	1					1		
Laparotomy.....	Gunshot wound with perforation of intestines.	1				1		1		
Do.....	Gunshot wound, left iliac region.	1				1		1		
Do.....	Rupture of intestines.....	1	1					1		
Laparotomy, and toilet of abdominal cavity.	Rupture of liver.....	1				1		1		
Laparotomy and splenectomy.	Laceration of spleen.....	1				1		1		
Laparotomy, control of hemorrhage, and repair of laceration of mesentery.	Laceration of mesentery, peritoneum, and liver, and rupture of blood vessels in posterior mediastinum and pleural cavities.	1				1		1		
Laparotomy and ligation of deep epigastric artery and drainage.	Stab wound of abdomen..	2	1	1			2			
Laparotomy exploratory and drainage.. 1										
Laparotomy exploratory, with repair of abdominal wound.	Stab wound penetrating, with hernia of omentum.	1	1				1			

TABLE NO. 66.—Surgical operations performed by officers of the Medical Corps on officers and enlisted men of the Army during the calendar year 1915—Continued.

[illegible]

TABLE No. 66.—Surgical operations performed by officers of the Medical Corps on officers and enlisted men of the Army during the calendar year 1915—Continued.

Operation.	Disease or injury.	Cases.	Result.				Anesthetic.					
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Other general anesthetic.	Local.	None.
GENITO-URINARY SYSTEM—continued.												
Aspiration and Injection of phenol.....	2	51	51	.....	.....	.....	1	33	2	.....	11	4
Eversion of sac.....	3											
Resection of tunica vaginalis.....	4											
Buttonhole operation...	1											
Radical operation.....	1											
Incision and drainage...	1	3	3	.....	.....	.....	2	1	.....	.....	.....
Excision of sac.....	2											
Evacuation and Injection of phenol.....	1											
Aspiration.....												
Prostatectomy.....	Prostatitis chronic.....	2	2	.....	.....	.....	.....	2	.....	.....	.....	.....
Perineal section, and suprapubic cystotomy.	Rupture of deep urethra and urinary infiltration.	2	2	.....	.....	.....	.....	2	.....	.....	.....	.....
Cystotomy suprapubic and retrocatheterization and drainage.	Gunshot wound with rupture of deep urethra.	1	1	.....	.....	.....	.....	1	.....	.....	.....	.....
Cystotomy, perineal.....	Stricture, multiple membranous urethra with retention of urine.	1	1	.....	.....	.....	1	.....	.....	.....	.....	.....
Perineal urethrotomy and suprapubic cystotomy.	Stricture of urethra, deep..	1	1	.....	.....	.....	1	.....	.....	.....	.....	.....
Aspiration suprapubic.....	Hypertrophy of prostate and chronic cystitis.	2	2	.....	.....	.....	.....	.....	.....	.....	.....	2
Prostatotomy.....	Abscess of prostate.....	2	2	.....	.....	.....	.....	1	.....	.....	1	.....
Dilatation.....	Stricture of prostatic urethra.	4	4	.....	.....	.....	.....	2	.....	.....	1	1
Incision and drainage through perineum.	Cowperitis.....	1	1	.....	.....	.....	.....	.....	.....	.....	1	.....
Incision and drainage... 19	Perineal abscess.....	20	20	.....	.....	.....	.....	3	.....	.....	17	.....
External urethrotomy and curetment..... 1												
Incision and evacuation...	Perineal abscess, chronic tuberculous.	1	1	.....	.....	.....	.....	1	.....	.....	.....	.....
Incision and cauterization.	Periurethral abscess.....	17	17	.....	.....	.....	.....	4	.....	.....	13	.....
Incision and drainage... 14												
Incision and curetment. 2	Stricture of urethra.....	11	11	.....	.....	.....	.....	9	.....	.....	2	.....
Urethrotomy, internal.. 10												
Meatotomy and sounds. 1	Stricture of meatus.....	4	4	.....	.....	.....	.....	.....	.....	.....	3	1
Meatotomy.....	Fistula of urethra.....	2	2	.....	.....	.....	.....	1	.....	.....	1	.....
Plastic operation..... 1												
Excision..... 1	Hypospadias.....	1	1	.....	.....	.....	.....	.....	.....	.....	1	.....
Plastic operation.....	Elongated and redundant prepuce.	151	151	.....	.....	.....	1	18	1	.....	131	.....
Circumcision.....	Phimosis.....	260	260	.....	.....	.....	1	20	.....	.....	239	.....
	Paraphimosis.....	13	13	.....	.....	.....	.....	8	.....	.....	5	.....
	Venereal sore.....	19	19	.....	.....	.....	.....	9	.....	.....	10	.....
	Balanitis.....	5	5	.....	.....	.....	.....	2	.....	.....	3	.....
	Herpes progenitalis.....	2	2	.....	.....	.....	.....	.....	.....	.....	2	.....
Excision.....	Enuresis.....	1	1	.....	.....	.....	.....	1	.....	.....	.....	.....
	Scar tissue resulting from circumcision.	1	1	.....	.....	.....	.....	1	.....	.....	.....	.....
Trout's operation..... 3	Redundant scrotum.....	5	5	.....	.....	.....	.....	4	1	.....	.....
Resection..... 2												
Incision and drainage.....	Abscess of scrotum.....	2	2	.....	.....	.....	.....	1	.....	.....	.....	1
VASCULAR SYSTEM.												
Trephining and drainage 1	Cerebral hemorrhage (1 traumatic).	2	.....	1	.....	1	.....	2	.....	.....	.....	.....
Decompression and exploration of parietal region..... 1												
Ligation.....	Laceration superficial femoral artery.	1	1	.....	.....	.....	.....	1	.....	.....	.....	.....
Ligation of blood vessels....	Incised wound of face and neck.	1	1	.....	.....	.....	.....	1	.....	.....	.....	.....

TABLE No. 66.—Surgical operations performed by officers of the Medical Corps on officers and enlisted men of the Army during the calendar year 1915—Continued.

[illegible]

TABLE NO. 66.—Surgical operations performed by officers of the Medical Corps on officers and enlisted men of the Army during the calendar year 1915—Continued.

			Result.			Anesthetic.					
			Partially suc- cessful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Other general anesthetic.	Local.	None.
SKIN AND CELLULAR TISSUE —continued.											
Incision and curetment.	1	Onychia.....	7	7			1			3	3
Incision and drainage...	4										
Excision.....	1										
Removal of nail.....	1										
Excision.....		Deformed toenail.....	5	5			1			4	
Do.....		Verrucae.....	5	5		1				4	
LYMPHATIC SYSTEM.											
Adenectomy.....		Adenitis, tuberculous.....	5	5			2			3	
Do.....	164										
Incision and curetment.	18	Adenitis, inguinal, vene- real.	533	533		19	152			290	73
Incision and drainage...	380										
Cauterization.....	1	Adenitis, inguinal, non- venereal.	233	233		17	90			57	30
Adenectomy.....	69										
Incision and curetment.	8	Adenitis, inguinal, nature not stated.	6	6					1	5	
Incision and drainage...	156										
Incision and injection of iodoform.		Adenitis, various locations, nature not stated.	23	23			8	1		11	3
Adenectomy.....	4										
Incision and drainage...	16	Lymphangitis.....	4	4						1	3
Incision and curetment	3										
Incision and drainage.....		Cyst, cervical lymphatic gland.	1	1						1	
Excision.....											
MUSCLES, TENDONS, FAS- CIAE, LIGAMENTS AND BURSAE.											
Suture of muscle.....		Incised wound of supina- tor longus.	1	1			1				
Suture of muscles, fascia, and skin.		Incised wound of hand....	1	1						1	
Tenorrhaphy.....		Severed tendons.....	13	13			6			3	4
Freeing of adhesions, and tendon lengthen- ing.....	1										
Tenotomy and length- ening of long flexor tendon.....	1	Contracted tendon, finger..	2	2			1			1	
Tenotomy, partial.....											
Excision and freeing of ten- dons.		Flexed finger.....	1	1						1	
Evacuation.....		Old scars involving ten- dons.	1	1			1				
Free end of vastus externus anchored to quadriceps extensor tendon.		Tenosynovitis.....	1	1						1	
Suture of muscle and sheath		Rupture of quadriceps ex- tensor tendon.	1	1			1				
Excision of bursa and tu- bercle, with attachment of ligamentum patellae to freshened tibia.		Rupture of rectus femoris 2 inches below patella.	1	1			1				
Tenotomy of flexor longus hallucis tendon opposite internal malleolus.		Bursitis, chronic ligamen- tum patellae with de- tachment of tubercle.	1	1				1			
Tenotomy, flexor tendon...		Flexed contracture of the 5 toes.	1	1			1				
Excision of bursa.....	7	Hammer toe.....	1	1						1	
Aspiration.....	1	Bursitis.....	17	17		1	3			13	1
Incision and drainage...	8										
Incision and curetment.	1	Ganglion.....	9	9			2			7	
Excision.....											
Do.....		Bursa.....	2	2			2				
BONES.											
Removal of fragments and drainage.		Fracture, compound com- minuted, fronto-parietal junction.	1	1			1				
Trephining and removal of depressed fragment outer table.		Fracture, compound, de- pressed parietal bone.	1	1						1	

TABLE NO. 66.—Surgical operations performed by officers of the Medical Corps on officers and enlisted men of the Army during the calendar year 1915—Continued.

Operation.	Disease or injury.	Cases.	Result.					Anesthetic.				
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Other general anesthetic.	Local.	None.
BONES—continued.												
Elevation and removal of bone fragments.	Fracture, compound comminuted, frontal bone.	1	1	.....	.....	.....	.....	1	.....	.....	.....	.....
Do.....	Fracture, depressed frontal bone, gunshot.	1	.....	.....	.....	1	.....	.....	.....	.....	.....	1
Inter-musculo-temporal decompression.	Fracture of skull with subdural hemorrhage.	2	1	.....	.....	1	.....	1	.....	.....	.....	1
Cushing's decompression operation.	Fracture, compound comminuted, base of skull.	1	.....	.....	1	.....	.....	1	.....	.....	.....	.....
Trephining, removal of depressed bone, and epidural and subdural clots.	Fracture of skull, comminuted, with epidural and subdural clots.	1	1	.....	.....	.....	.....	1	.....	.....	.....	.....
Decompression..... 2	Fracture of skull.....	4	3	.....	.....	1	.....	3	.....	.....	.....	1
Trephining..... 2		1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Elevation of depressed fragments.	Gunshot wound of cranium	1	1	.....	.....	.....	.....	1	.....	.....	.....	.....
Laminectomy.....	Fracture, complete, seventh cervical vertebra.	1	.....	1	.....	.....	.....	1	.....	.....	.....	.....
Exploratory operation.....	Congenital malformation greater cornua hyoid bone.	1	1	.....	.....	.....	.....	1	.....	.....	.....	.....
Curetment and wiring of fragments..... 1	Fracture, inferior maxilla..	12	9	2	1	.....	.....	9	.....	.....	1	2
Wiring of fragments.... 10												
Exploratory operation, with a view to wiring fragments, found impracticable, teeth wired..... 1												
Circular wire to fracture												
Application of Lane bone plate..... 5	Fracture of clavicle.....	9	9	.....	.....	.....	.....	8	.....	.....	1	.....
Removal of wire..... 1												
Removal of Lane bone plate..... 2	Fracture of clavicle with vicious union.	1	1	.....	.....	.....	.....	1	.....	.....	.....	.....
Freshening of ends, and resetting.												
Osteotomy, resetting and wiring..... 1	Fracture of clavicle with nonunion.	2	1	.....	1	.....	.....	2	.....	.....	.....	.....
Excision, fibrous tissue, resection and plating. 1												
Removal of spicula of bone.	Fracture, incomplete, clavicle.	1	1	.....	.....	.....	.....	1	.....	.....	.....	.....
Removal of small fragments	Fracture of scapula.....	1	1	.....	.....	.....	.....	1	.....	.....	.....	.....
Wiring to humerus of greater tuberosity.... 1	Fracture, greater tuberosity of humerus.	2	2	.....	.....	.....	.....	2	.....	.....	.....	.....
Reposition of fragments, and insertion of two bone grafts from crest of tibia..... 1												
Application of Lane bone plate.	Old fracture, ununited, humerus.	1	1	.....	.....	.....	.....	.....	1	.....	.....	.....
Removal of loose fragments and partial repair of joint capsule.	Fracture compound comminuted lower end of humerus and upper end of ulna.	1	1	.....	.....	.....	.....	1	.....	.....	.....	.....
Reduction and application of Sherman plates to both bones.	Fracture simple transverse radius and ulna.	1	1	.....	.....	.....	.....	1	.....	.....	.....	.....
Surgical fracture, removal of redundant callus, resetting and application of cast.	Slight angulation and redundant callus following fracture of radius and ulna.	1	1	.....	.....	.....	.....	1	.....	.....	.....	.....
Fractured ends freshened obliquely, brought into apposition, two holes made with bone drill and parts held firmly with kangaroo tendon.	Fracture simple radius, junction of upper and middle thirds with nonunion.	1	1	.....	.....	.....	.....	1	.....	.....	.....	.....
Wiring of fragments.... 1	Fracture simple of radius..	2	2	.....	.....	.....	.....	2	.....	.....	.....	.....
Application of Lane bone plate..... 1												
Do.....	Deformity of wrist from old Colles's fracture.	1	1	.....	.....	.....	.....	1	.....	.....	.....	.....

TABLE NO. 66.—Surgical operations performed by officers of the Medical Corps on officers and enlisted men of the Army during the calendar year 1915—Continued.

										Anesthetic.				
										Chloroform and ether.	Other general anesthetic.	Local.	None.	
Coccygectomy.....	Coccygodynia.....	1	1							1				
Freshening of fracture, nailing and splinting.	Fracture old, ununited, surgical neck of femur.	1	1							1				
Callus removed, reduction, Lane plate applied.	Fracture simple, unreduced, middle third of femur.	1	1							1				
Application of Lane bone plate.	Fracture of femur.....	3	3							3				
Wiring of fragments.....	Fracture simple transverse of patella.	1	1							1				
Incision and suturing of fragments.	Fracture simple of patella.	2	2							2				
Removal of wire.....	do.....	1	1							1				
Reduction resection and plating.	Fracture simple tibia and fibula.	1	1							1				
Excision of fragments and application of Lane bone plate.	Fracture compound comminuted tibia and fibula.	1	1							1				
Incision and wiring of fragments.....	Fracture simple of tibia and fibula.	2	2							2				
Excision of protruding spicula of bone in malunion of tibia.....		1												
Fracture exposed and metal plate inserted..	Fracture ununited tibia and fibula.	2	1	1	1					3				
Freshening of ends and wiring.....		1												
Old plate removed, new plate inserted.	Fracture compound comminuted both bones of leg.	1	1							1				
Removal of Lane bone plate	Fracture of tibia and fibula	3	3							1		2		
Wiring of fragments.....	Fracture compound of tibia	1	1							1				
Do.....	Fracture simple of tibia...	1	1							1				
Do.....	Fracture comminuted of fibula.	1	1							1				
Incision, freshening of fragments and approximation with catgut.	Fracture comminuted tibia	1	1							1				
Removal of Lane bone plate	Fracture of tibia, old.....	3	3							3				
Do.....	Fracture of fibula.....	1	1							1				
Removal of wire.....	Fracture of tibia.....	1	1							1				
Incision through old scar and removal of wire.	Painful leg from old fracture.	1	1							1				
Chiseling of redundant callus, straightening tibia and splinting.	Redundant callus with angulation site of old fracture of tibia.	1	1					1						
Removal of sequestra.....	Old compound fracture of tibia.	1	1							1				
Suture of fragments....	Fracture simple of malleolus.	2	2							2				
Lambotte's operation..	Fracture compound comminuted, metacarpal.	1	1									1		
Incision and removal of fragments.	Fracture metacarpal, non-union.	1	1							1				
Resection and removal of fragments.	Fracture compound of thumb.	1	1							1				
Suturing of wound and setting of fracture.	Fracture of scaphoid.....	1	1							1				
Excision of fragments.....	Fracture compound comminuted, metatarsal.	1	1							1				
Removal of loose fragments.	Old fracture, metatarsal...	1	1							1				
Removal of painful fragment.	Fracture compound of great toe.	1	1							1				
Excision of fragments.....	Sinus persistent at site of fracture.	1	1							1				
Incision and removal of wire	Gunshot wound of ilium, perforating old.	2	2					1		1				
Excision of fragments.....	Necrosis of clavicle, old gunshot wound.	1	1							1				
Do.....	Necrosis, site of old fracture	3	3					1		2				

TABLE NO. 66.—Surgical operations performed by officers of the Medical Corps on officers and enlisted men of the Army during the calendar year 1915—Continued.

Operation.	Disease or injury.	Cases.	Result.				Anesthetic.					
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Other general anesthetic.	Local.	None.
BONES—continued.												
Removal of sequestrum....	Necrosis of tibia, site of fracture.	2	2	....	....	....	....	1	....	....	1	....
Removal of dead bone.....	Necrosis of metacarpal....	1	1	....	....	....	1	....	....	....	....	....
Do..... 7	Necrosis, site not stated...	12	10	2	....	....	....	4	....	....	7	1
Incision and curetment. 5												
Trephining of femur.....	Osteomyelitis of femur....	1	1	....	....	....	....	1	....	....	....	....
Removal of bone plate and excision of excessive callus.	Osteomyelitis chronic suppurative at site of screw in bone plate.	1	1	....	....	....	....	1	....	....	....	....
Curetment of bone and medulla.	Osteomyelitis tibia, site of fracture.	1	1	....	....	....	1	....	....	....	....	....
Excision of anterior surface.	Osteomyelitis, middle third of tibia.	1	1	....	....	....	....	1	....	....	....	....
Excision of terminal phalanx.	Osteomyelitis thumb.....	1	1	....	....	....	....	1	....	....	....	....
Curetment.....	Rarefying osteitis tibia....	1	1	....	....	....	....	1	....	....	....	....
Excision of periosteum, curetment of bone and drainage.	Osteoperiostitis tibia.....	1	1	....	....	....	....	1	....	....	....	....
Excision of periosteum.....	Osteoperiostitis plastic, tubercle of tibia.	1	1	....	....	....	....	1	....	....	....	....
Incision, curetment, and drainage.	Osteoperiostitis tibia syphilitic.	1	1	....	....	....	....	1	....	....	....	....
Do.....	Osteoperiostitis, site not stated.	2	2	....	....	....	....	2	....	....	....	....
Do..... 1	Periostitis of tibia.....	4	2	2	....	....	....	3	....	....	1	....
Incision and drainage.. 3												
Curetment of periosteum and bone with drainage.	Periostitis suppurative fibula.	1	1	....	....	....	1	....	....	....	....	....
Do..... 6	Periostitis, site not stated.	7	7	....	....	....	....	3	....	....	3	1
Incision and curetment. 1												
Excision.....	Exostosis, tibia.....	1	1	....	....	....	....	1	....	....	....	....
Do.....	Exostosis, os calcis.....	4	4	....	....	....	....	4	....	....	....	....
Do.....	Exostosis, scaphoid, foot..	1	1	....	....	....	....	1	....	....	....	....
Do.....	Exostosis, first metatarsal.	1	1	....	....	....	....	....	....	....	1	....
Do.....	Exostosis, site not stated..	6	6	....	....	....	....	5	....	....	1	....
JOINTS.												
Arthrotomy, removal of redundant capsule.	Dislocation chronic subcoracoid.	1	1	....	....	....	....	1	....	....	....	....
Capsular ligament shortened by plication anterior route.	Recurrent dislocation shoulder.	1	1	....	....	....	....	....	....	....	1	....
Do.....	Subluxation shoulder.....	1	1	....	....	....	....	1	....	....	....	....
Incision and drainage.....	Arthritis elbow, gonorrheal	1	1	....	....	....	....	1	....	....	....	....
Reduction and suture.....	Dislocation, acromio-clavicular.	1	1	....	....	....	....	1	....	....	....	....
Excision head of radius....	Limitation of extension and rotation of elbow joint.	1	1	....	....	....	....	1	....	....	....	....
Removal.....	Foreign body elbow joint..	3	3	....	....	....	....	2	....	....	1	....
Resection.....	Recurrent dislocation finger.	1	1	....	....	....	....	....	....	....	1	....
Removal of callus.....	Ankylosis, thumb.....	1	1	....	....	....	....	....	....	....	1	....
Freeing of adhesions.....	Ankylosis phalangeal joint	1	1	....	....	....	....	1	....	....	....	....
Incision and removal detached fragments.	Partially detached segments inner condyle of femur.	1	1	....	....	....	....	1	....	....	....	....
Exploration of joint.... 1	Synovitis knee joint.....	2	2	....	....	....	....	2	....	....	....	....
Incision and drainage.. 1												
Do.....	Arthritis, site not stated..	2	2	....	....	....	....	2	....	....	....	....
Excision of villi.....	Synovitis chronic due to hypertrophied synovial villi.	1	1	....	....	....	....	1	....	....	....	....
Paracentesis.....	Hydrarthrosis knee joint..	1	1	....	....	....	....	....	....	....	....	1
Aspiration.....	Hydrops articuli.....	1	1	....	....	....	....	....	....	....	....	1
Do.....	Contusion knee joint.....	1	1	....	....	....	....	1	....	....	....	....
Excision.....	Post-patellar fringe.....	1	1	....	....	....	....	1	....	....	....	....
Resection interphalangeal..	Hammer toe.....	1	1	....	....	....	....	1	....	....	....	....

TABLE NO. 66.—Surgical operations performed by officers of the Medical Corps on officers and enlisted men of the Army during the calendar year 1915—Continued.

Operation.	Disease or injury.	Cases.	Result.				Anesthetic.				
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Other general anesthetic.	Local.
	FOREIGN BODIES—contd.										
Removal.....	Nail in, situplastic operation ankle joint.	2	2	.....	.....	.....	.....	1	.....	.....	1
Removal piece of drill and necrosed bone.	Piece of drill in external malleolus.	1	1	.....	.....	.....	.....	1	.....	.....	.....
Incision and extraction.....	Foreign body in wrist.....	1	1	.....	.....	.....	.....	.....	.....	.....	1
Do.....	Piece of steel.....	1	1	.....	.....	.....	.....	.....	.....	.....	1
	TUMORS.										
Excision.....	Carcinoma, metastatic.....	1	1	.....	.....	.....	.....	.....	.....	.....	1
Do.....	Sarcoma.....	2	1	1	.....	.....	.....	2	.....	.....	.....
Do.....	Fibro-endothelioma, parotid and submaxillary glands.	1	1	.....	.....	.....	.....	1	.....	.....	.....
Section of bony tumor for microscopical examination.	Osteosarcoma of fibula.....	1	1	.....	.....	.....	1	.....	.....	.....	.....
Excision with resections lower jaw.	Epithelioma inferior maxilla.	1	1	.....	.....	.....	.....	1	.....	.....	.....
Excision with electric knife.	Epithelioma of thigh.....	1	1	.....	.....	.....	.....	.....	.....	.....	1
Excision of rodent ulcer. 1	Epithelioma, site not stated	2	2	.....	.....	.....	.....	1	.....	.....	1
Excision..... 1		1	1	.....	.....	.....	.....	.....	.....	.....	1
Do.....	Ephithelioma, benign.....	2	2	.....	.....	.....	.....	.....	.....	.....	2
Do.....	Chondroma.....	4	4	.....	.....	.....	.....	.....	.....	.....	4
Do.....	Cyst.....	7	7	.....	.....	.....	.....	.....	.....	.....	5
Incision and drainage... 1	Dermoid cyst.....	6	6	.....	.....	.....	.....	.....	.....	.....	2
Excision..... 6		1	1	.....	.....	.....	.....	.....	.....	.....	1
Do.....	Enchondroma.....	6	6	.....	.....	.....	.....	2	.....	.....	4
Do.....	Fibroma.....	2	2	.....	.....	.....	.....	.....	.....	.....	2
Incision and drainage.....	Hematoma.....	17	17	.....	.....	.....	.....	5	.....	.....	12
Excision.....	Lipoma.....	2	2	.....	.....	.....	.....	2	.....	.....	.....
Do.....	Myoma.....	1	1	.....	.....	.....	.....	.....	.....	.....	1
Do.....	Neuroma.....	1	1	.....	.....	.....	.....	1	.....	.....	.....
Do.....	Osteoma, base fifth metatarsal.	6	6	.....	.....	.....	.....	2	.....	.....	4
Excision and suture.....	Papilloma.....	53	53	.....	.....	.....	.....	3	.....	.....	44
Do..... 4	Sebaceous cyst.....	1	1	.....	.....	.....	.....	.....	.....	.....	1
Incision and drainage.. 12		1	1	.....	.....	.....	.....	.....	.....	.....	1
Excision..... 28	Serous cyst.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....
Excision and cauterization..... 2	Subcutaneous tumor, wrist, type not stated.	3	3	.....	.....	.....	.....	2	1	.....	.....
Excision and curetment 7	Tumor of breast, type undetermined.	1	1	.....	.....	.....	.....	1	.....	.....	.....
Incision.....		1	1	.....	.....	.....	.....	.....	.....	.....	.....
Incision and removal.....	Tumor of plantar fascia, type not stated.	1	1	.....	.....	.....	.....	1	.....	.....	.....
Amputation of breast... 1	Tumor, type and site not stated.	1	1	.....	.....	.....	.....	.....	.....	.....	.....
Excision..... 2		1	1	.....	.....	.....	.....	.....	.....	.....	.....
Do.....											
Do.....											
	PLASTIC OPERATIONS.										
Plastic operation forming new lip.	Scar upper lip.....	1	1	.....	.....	.....	.....	.....	.....	.....	1
Plastic operation to close in granulating area.	Granulating area from operation for cleft in nose.	1	1	.....	.....	.....	.....	.....	.....	.....	1
	Lacerated wounds.....	1	1	.....	.....	.....	.....	1	.....	.....	.....
	Cicatricial contracture of finger.	1	1	.....	.....	.....	.....	.....	.....	.....	1
	Cicatricial adhesions, hand, from gunshot wound.	1	1	.....	.....	.....	.....	1	.....	.....	.....
Plastic operation, method not stated.	Cicatrix inner angle of eye.	1	1	.....	.....	.....	.....	.....	.....	.....	1
	Chronic dislocation of shoulder.	1	1	.....	.....	.....	.....	1	.....	.....	.....
	Arthritis, knee.....	1	1	.....	.....	.....	.....	1	.....	.....	.....
	Gunshot wound of hand...	1	1	.....	.....	.....	.....	1	.....	.....	.....

TABLE NO. 68.—Surgical operations performed by officers of the Medical Corps on officers and enlisted men of the Army during the calendar year 1915—Continued.

Operation.	Disease or injury.	Cases.	Result.				Anesthetic.					
			Successful.	Partially suc- cessful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Other general anesthetic.	Local.	None.
MISCELLANEOUS OPERA- TIONS.												
Exploratory operation.....	Suspected psoas abscess....	1	1	....	....	....	1	....	....	....	....
Injection of peroxide of hy- drogen.	Contusion.....	1	1	....	....	....	1	....	....	....	....
Suturing.....	Incised wound.....	57	57	....	....	....	2	7	....	....	12 36
Do..... 39	Lacerated wound.....	40	40	....	....	....	....	5	....	....	15 20
Removal of porcelain fragments, repair and suture..... 1												
Incision and suture..... 1	Punctured wound.....	12	12	....	....	....	....	3	....	....	9
Incision and drainage.. 7												
Incision, curetment, and phenol..... 3												
Cauterization..... 1	Gunshot wound.....	6	3	1	...	2	2	3	....	....	1 ...
Exploratory operation . 1												
Suturing and cleansing. 2												
Incision and drainage.. 3	Infected wound.....	24	24	....	....	....	....	5	....	....	15 4
Do.....	Calcareous nodule.....	1	1	....	....	....	....	....	....	....	1 ...
Excision.....												
Total number of cases.	.....	6,323	6,244	36	15	28	135	2,459	63	7,285	794

TABLE No. 67.—Numerical view of the effect of disease and injury on United States troops serving at home and abroad in the year 1915, compared with the corresponding data for the year 1914, by races.

ABSOLUTE NUMBERS.

	Mean strength.	Admitted.			Discharged on certificate of disability.			Died.			Total losses.			Noneffective from sickness.	
		Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease.	Injury.	Days treated.	Constantly non-effective.
White troops.....	1915	87,458													
	1914	81,750	65,171	53,387	11,784	1,259	1,129	404	220	184	1,663	1,349	314	820,537	2,248.05
Colored troops.....	1915	54,592	44,270	44,270	10,322	1,066	935	363	188	175	1,429	1,123	306	710,545	1,946.70
	1914	5,804	4,271	3,533	701	92	83	32	26	6	124	109	15	60,286	165.17
Porto Rican troops.....	1915	5,478	3,487	2,796	38	79	69	29	20	9	108	89	19	54,338	148.88
	1914	681	378	340	5	5	.....	3	2	1	8	7	1	5,662	15.51
Philippine Scouts.....	1915	669	421	367	54	6	.....	3	.....	3	9	6	3	5,499	15.07
	1914	5,505	3,159	2,657	502	63	53	14	9	5	77	67	10	31,506	86.31
	1914	5,020	3,585	3,104	481	48	44	16	11	5	64	55	9	37,189	101.89

PROPORTIONATE NUMBERS.

[Ratios per 1,000 of mean strength.]

	Mean strength.	Admitted.			Discharged on certificate of disability.			Died.			Total losses.			Constantly non-effective.	
		Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease.	Injury.	Each soldier.	Each case.
White troops.....	1915	87,458													
	1914	81,750	745.17	134.74	14.16	12.70	1.46	2.47	2.07	18.70	15.17	3.53	25.70	9.38	12.59
Colored troops.....	1915	667.79	641.53	126.26	12.90	11.31	1.58	2.27	2.12	17.29	13.58	3.70	23.81	8.69	13.02
	1914	5,804	735.87	127.15	15.85	14.30	1.55	4.48	1.03	21.36	18.78	2.58	28.46	10.39	14.12
Porto Rican troops.....	1915	636.55	508.58	127.97	14.42	12.60	1.83	3.65	1.64	19.71	16.25	3.47	27.17	9.92	15.58
	1914	681	555.07	55.80	7.34	7.34	.....	2.94	1.47	11.75	10.28	1.47	22.78	8.31	14.98
Philippine Scouts.....	1915	669	629.30	80.72	8.97	8.97	.....	.....	4.48	13.45	8.97	4.48	22.52	8.22	18.06
	1914	5,505	573.84	91.19	11.44	10.53	.91	1.63	.91	13.98	12.16	1.82	15.68	5.72	9.97
	1914	5,020	714.14	95.82	9.56	8.76	.80	2.19	1.00	12.75	10.95	1.80	20.30	7.41	10.37

TABLE No. 68.--Admissions to sick report, discharges, and deaths, with ratios per 1,000 of mean strength, in which all available data for the decade ending Dec. 31, 1914, are placed in comparison with the year 1915--Continued.

	Decade, years 1905-1914. [Army--Enlisted American troops.]				The Army, 1915. [American troops, enlisted men.]			
	S. G. O., 697,415--A. G. O., 709,271.				S. G. O., 93,262--A. G. O., 94,729.			
	Admissions.		Discharges.		Admissions.		Discharges.	
Causes of admission to sick report.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Pulmonary emphysema.....	31	0.04	9	0.01	2	0.02		
Diseases of the teeth and gums.....	5,742	8.23	71	.10	494	5.30	1	0.01
Other diseases of the mouth and annexe.....	606	.87	1	.00	84	.90		
Diseases of the pharynx.....	43,804	62.81	3	.00	6,071	65.10	1	.01
Ulcer of stomach.....	124	.18	15	.02	23	.25	1	.01
Other diseases of stomach (cancer excepted).....	20,250	29.04	54	.08	1,122	12.03	7	.07
Diarrhea and enteritis.....	31,841	45.66	37	.05	2,939	31.51	1	.01
Ankylostomiasis.....	856	1.23	1	.00	41	.44	1	.01
Intestinal parasites.....	1,127	1.62			96	1.03		
Appendicitis.....	4,086	5.86	41	.06	815	8.74	4	.04
Hernia.....	3,007	4.31	310	.44	353	3.79	19	.20
Diseases of the anus and fecal fistula.....	601	.86	6	.01	76	.81		
Other diseases of the intestines.....	16,246	23.29	38	.05	2,772	29.72	6	.06
Cirrhosis of liver.....	99	.14	15	.02	5	.05	1	.01
Biliary calculi.....	191	.27	2	.00	9	.10	1	.01
Other diseases of liver and gall bladder.....	2,744	3.93	21	.03	389	4.17	2	.02
Peritonitis.....	48	.07	3	.00	1	.01		
Acute nephritis.....	248	.36	3	.00	32	.34		
Bright's disease.....	442	.63	123	.17	54	.58	12	.13
Other diseases of the kidney and annexe.....	265	.38	18	.03	27	.29	1	.01
Diseases of the bladder.....	1,752	2.51	243	.34	196	2.10	33	.35
Diseases of the urethra.....	615	.88	4	.01	143	1.53	1	.01
Diseases of the prostate.....	69	.10			15	.16	1	.01
Diseases of the male genital organs (non venereal).....	5,465	7.84	28	.04	403	4.32	1	.01
Furuncle and carbuncle.....	17,244	24.73			1,625	17.42		
Acute abscess.....	9,004	12.91	9	.01	1,253	13.44	1	.01
Diseases of the bones.....	1,187	1.70	83	.12	236	2.53	6	.06
Diseases of the joints.....	2,504	3.59	134	.19	382	4.10	23	.24
Congenital malformations.....	1,960	2.81	568	.80	367	3.94	1	.01
Sanfilly.....	14	.02	9	.01	2	.02		
Febricula, simple continued, and other fevers of unde- termined causation.....	3,925	5.63			186	1.99		
			1	.00				

Under observation, undiagnosed and unknown. Malingering.....	4, 437 483	6.38 .60	22	.03	22	.03	22	.03	79	.85 .53	1	.01
DISEASES AND INJURIES GROUPED.												
General diseases.....	239, 772	243.60	4, 005	5.65	974	1.37	22, 101	236.93	337	3.56	98	1.03
Epidemic diseases.....	96, 249	138.01	1, 126	.13	330	.47	9, 626	103.21	14	.15	33	.35
Other general diseases.....	143, 523	205.70	3, 879	5.47	644	.91	12, 475	133.76	323	3.41	65	.69
Diseases of the nervous system and organs of special sense.....	26, 958	37.22	3, 109	4.38	163	.23	2, 854	30.60	493	5.20	24	.26
.....	11, 629	16.67	2, 304	3.25	156	.22	1, 290	13.83	449	4.74	24	.25
.....	9, 017	12.90	466	.66	7	.01	940	10.08	24	.26		
.....	5, 312	7.62	339	.43			624	6.69	20	.21		
.....	16, 261	23.32	850	1.20	234	.33	1, 739	18.65	64	.68	24	.26
.....	45, 585	65.36	286	.40	257	.36	6, 000	60.04	38	.40	40	.42
.....	131, 442	188.47	621	.88	261	.35	15, 316	164.22	54	.57	30	.32
.....	9, 156	13.13	428	.60	116	.17	927	9.94	53	.56	16	.17
.....	54, 567	78.24	126	.18	3	.00	5, 283	54.65	7	.07	2	.02
.....	20, 946	30.03	647	.91	2	.00	2, 357	26.27	166	1.74	1	.01
.....	1, 960	2.81	568	.80			367	3.94	1	.01		
.....	14	.02	9	.01			2	.02				
.....	9, 114	13.07	22	.03	28	.03	374	4.01			1	.01
Total for diseases.....	654, 775	795.47	10, 669	15.04	2, 026	2.85	56, 920	610.32	1, 212	12.79	246	2.60
External causes.....	126, 124	180.85	1, 267	1.77	1, 042	2.32	12, 522	134.27	139	1.47	190	2.01
Total for disease and external causes.....	680, 899	976.32	11, 926	16.81	3, 067	5.17	69, 442	744.59	1, 351	14.26	436	4.60

TABLE No. 68½.—Admissions to sick report, discharges, deaths, and noneffectiveness, with
ing American, Porto Rican, and Philippine

Serial Nos.	Inter- national classi- fica- tion.	Mean strength.....	Officers, Army.							
			S. G. O., 4,394—A. G. O., 4,873.							
			Admis- sions.		Discharges.		Deaths.		Noneftec- tive.	
			Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
1	1	Typhoid fever.....	1	0.23					0.30	0.99
2	1a	Paratyphoid fever.....	1	.23					.10	.02
5	2	Typhus fever.....								
7-11	4	Malaria.....	53	12.06					2.18	.59
7		Estivo-autumnal fever.....	12	2.73					.63	.14
8		Malarial cachexia.....	4	.91					.40	.09
9		Quartan malarial fever.....								
10		Tertian malarial fever.....	29	6.60					.97	.21
11		Undetermined malarial fever..	8	1.82					.18	.04
12	5	Smallpox and varioloid.....								
13	5b	Vaccinia.....								
14	6	Measles.....	2	.46					.10	.02
15	7	Scarlet fever.....	2	.46					.11	.02
17	9	Diphtheria.....	5	1.14					.18	.04
18	10	Influenza.....	266	60.54					2.50	.80
19	12	Asiatic cholera.....								
20	13	Cholera nostras.....								
21-23	14	Dysentery.....	26	5.92					2.06	.47
21		Bacillary.....	1	.23					.02	.00
22		Entamoebic.....	22	5.01					1.93	.44
23		Unclassified.....	3	.68					.10	.02
27	18	Erysipelas.....	1	.23					.06	.01
29	19b	Dengue.....	92	20.94					1.66	.33
31	19d	German measles.....	1	.23					.03	.01
32	19e	Hemoglobinuric fever.....								
34	19g	Mumps.....	7	1.59					.04	.05
37	20	Purulent infection and septicemia..	1	.23			1	0.21	.02	.00
42-46	25	Mycoses.....								
49-57	28-34	Tuberculosis, all.....	8	1.82					6.81	1.55
49-51	28	Tuberculosis of lungs.....	7	1.60					6.65	1.51
52	29	Miliary tuberculosis, acute.....								
53-57	30-34	Tuberculosis of other organs...	1	.23					.17	.04
58	36	Scoliosis (rickets).....								
59-74	37-38	Venereal diseases, all.....	20	4.55					2.43	.55
59-64	37	Syphilis.....	8	1.82					1.75	.40
65-67	38a	Soft chancre.....	2	.46					.17	.04
68-74	38b	Gonococcus infection.....	10	2.28					.51	.12
75-79	39-45	Cancer and other malignant tumors	1	.23			1	.21	.04	.01
80	46	Benign tumors.....	1	.23					.39	.09
81-85	47-48	Rheumatism, articular, all.....	16	3.64					1.21	.28
81-82	47	Acute articular rheumatism.....	11	2.50					.47	.11
83-85	48	Chronic articular rheumatism..	5	1.14					.73	.17
87-88	50	Diabetes.....	2	.46					.11	.02
89	51	Exophthalmic goitre.....	1	.23					.15	.03
97-100	56	Alcoholism and results.....	20	4.55					.68	.15
101-102	57-58	Chronic occupational poisoning...								
103-104	59	Other chronic poisoning, including drug habit.....								
107	61	Simple meningitis.....								
108	61a	Epidemic cerebrospinal meningitis.								
109	62	Locomotor ataxia.....	1	.23					.20	.05
110-115	63	Other diseases of spinal cord.....	2	.46					.65	.15
116	64	Cerebral hemorrhage, apoplexy...	1	.23			1	.21	.27	.06
117-119	66	Paralysis without specified cause...	3	.68					.42	.10
120-126	67-68	Mental alienation.....	8	1.82					.84	.19
127	69	Epilepsy.....	3	.68					.09	.02
129-133	73	Neuralgia and neuritis.....	51	11.61					3.37	.77
138-141	75a	Conjunctivitis.....	20	4.55					.36	.08
142	75b	Trachoma.....	1	.23					.12	.03
166	77	Pericarditis.....								
167	78	Acute endocarditis.....								
169-174	79	Organic heart disease.....	10	2.28			1	.41	.64	.14
175	80	Angina pectoris.....	1	.23					.01	.00
176-177½	81	Diseases of the arteries, atheroma, aneurism, etc.....	4	.91					.2	.12
178-179	82	Embolism and thrombosis.....								
181	83b	Hemorrhoids.....	79	6.60					1.00	.29

ratios per 1,000 of mean strength, for the Army; separately for officers, total enlisted (including troops) and grand total, year 1915.

Army, enlisted men (including Porto Rican troops and Philippine Scouts).										Army (entire), officers and enlisted men (including Porto Rican troops and Philippine Scouts).									
S. G. O., 99,448—A. G. O., 100,915.										S. G. O., 103,942—A. G. O., 105,738.									
Admissions.																			
Number.	Ratio.																		
7	0.07								1.33	0.01									
8	.08								1.13	.01									
3	.03								.13	.00									
2,560	25.74					2	0	.02	53.82	.54									
617	6.20					2		.02	15.74	.16									
10	.10								.06	.01									
19	.19								.33	.00									
1,719	17.29								33	.33	1,748	16.83						34.27	.33
195	1.95								3.79	.04	203	1.95						3.97	.04
5	.05								.48	.00	5	.05						.48	.00
377	3.79								4.84	.05	377	3.63						4.84	.05
641	6.45	8	0.08	22	.22				39.84	.40	643	6.19	8	0.08	22	.21		39.50	.38
50	.50					1	.01		4.78	.05	52	.50			1	.01		4.89	.05
61	.61					1	.01		2.62	.03	66	.64			1	.01		2.81	.03
3,207	32.25					4	.04		43.31	.44	3,473	33.44			4	.04		46.81	.45
2	.02					1	.01		.03	.00	2	.02			1	.01		.03	.00
1	.01								.01	.00	1	.01						.01	.00
253	2.54	5	.05	3	.03				18.08	.18	279	2.69	5	.05	3	.03		20.13	.19
38	.38								2.03	.02	39	.38						2.05	.02
175	1.75	5	.05	2	.02				14.35	.14	197	1.90	5	.05	2	.02		16.28	.16
40	.40					1	.01		1.70	.02	43	.41			1	.01		1.80	.02
23	.23	1	.01	1	.01				.84	.01	24	.23	1	.01	1	.01		.90	.01
1,773	17.83								28.81	.29	1,865	17.96						30.47	.29
77	.77								3.33	.03	78	.75						3.86	.03
975	9.80								45.54	.46	982	9.46						45.78	.44
7	.07					7	.07		.19	.00	8	.08			8	.08		.21	.00
2	.02								.04	.00	2	.02						.15	.00
354	3.56	196	1.94	31	.31				171.27	1.72	362	3.49	196	1.94	31	.29		178.08	1.71
325	3.27	186	1.84	23	.23				164.69	1.65	332	3.20	196	1.84	23	.22		171.33	1.65
4	.04					4	.04		.81	.01	4	.04			4	.04		.61	.01
25	.25	10	.10	4	.04				5.98	.05	26	.25	10	.10	4	.04		6.14	.05
10,295	103.52	81	.80	6	.06				459.49	4.62	10,315	99.13	81	.80	6	.06		461.92	4.48
2,041	20.32	47	.47	4	.04				128.98	1.30	2,049	19.73	47	.47	4	.04		130.72	1.28
2,222	22.34	2	.02						83.30	.84	2,224	21.42	2	.02				83.47	.80
6,032	60.66	32	.32	2	.02				247.22	2.19	6,042	58.18	32	.32	2	.02		247.73	2.39
22	.22	5	.05	9	.09				4.70	.05	23	.22	5	.05	10	.09		4.80	.05
135	1.36					1	.01		3.80	.04	136	1.31			1	.01		4.25	.04
548	5.52	19	.19						37.93	.38	564	5.43	19	.19				39.13	.37
456	4.58	5	.05						21.89	.27	466	4.49	5	.05				27.36	.26
93	.94	14	.14						11.04	.11	98	.94	14	.14				11.77	.11
14	.14	2	.02	4	.04				1.67	.02	16	.15	2	.02	4	.04		1.78	.02
24	.24	10	.10						6.22	.06	25	.24	10	.10				6.32	.06
1,237	12.04	24	.24	6	.06				19.91	.20	1,317	12.68	24	.24	6	.06		20.59	.20
4	.04								.44	.00	4	.04						.44	.00
44	.44	9	.09						3.38	.03	44	.42	9	.09				3.38	.03
2	.02	2	.02	1	.01				1.05	.01	2	.02	2	.02	1	.01		1.05	.01
25	.25	7	.07	10	.10				8.90	.04	26	.25	7	.07	10	.09		8.90	.04
13	.13	3	.03						3.20	.03	14	.13	3	.03				3.40	.03
9	.09	5	.05	1	.01				2.47	.02	11	.11	5	.05	1	.01		3.12	.03
8	.08					7	.07		.17	.00	9	.09			8	.08		.44	.00
26	.26	5	.05	1	.01				2.78	.03	29	.28	5	.05	1	.01		3.20	.03
372	3.74	329	3.26	5	.05				84.78	.85	380	3.66	329	3.26	5	.05		85.62	.82
117	1.18	66	.65						14.78	.13	120	1.16	66	.65				15.47	.15
495	4.98	25	.25						23.83	.24	546	5.26	25	.25				27.20	.26
454	4.57	2	.02						9.15	.09	474	4.56	2	.02				9.51	.09
20	.20	1	.01						1.74	.02	21	.20	1	.01				1.86	.02
8	.08					2	.02		.69	.01	8	.08			2	.02		.69	.01
9	.09	2	.02	3	.03				.79	.01	9	.09	2	.02	3	.03		.79	.01
107	1.08	47	.47	22	.22				16.22	.16	117	1.13	47	.47	24	.23		16.87	.16
10	.10	1	.01	2	.02				.27	.00	11	.11	1	.01	2	.02		.28	.00
14	.14	4	.04	7	.07				2.75	.03	18	.17	4	.04	7	.07		3.31	.03
3	.03	2	.02	1	.01				.62	.01	3	.03	2	.02	1	.01		.62	.01
549	5.51								15.81	.16	577	5.56						17.49	.17

TABLE No. 68½.—Admissions to sick report, discharges, deaths, and noneffectiveness, with
ing American, Porto Rican, and Philippine

Serial Nos.	Inter-national classification.	Officers, Army.								
		Mean strength.....	S. G. O., 4,394—A. G. O., 4,873.							
			Admis-sions.		Discharges.		Deaths.		Noneffec-tive.	
			Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Causes of admission to sick report.										
183	83d	Varicose veins.....	3	0.68					0.19	0.04
184	83e	Variocoele.....	1	.23					.63	.01
185-187	84	Diseases of the lymphatic system..	4	.91					.11	.02
193-199	86	Diseases of the nasal fossæ.....	130	29.59					1.71	.39
200-202	87	Diseases of the larynx.....	20	4.55					.26	.05
203-204	88	Diseases of the thyroid body.....								
205-206	89-90	Bronchitis.....	186	42.33					2.94	.67
207	91	Broncho-pneumonia.....	6	1.37					.63	.14
208	92	Pneumonia.....	5	1.14			2	0.41	.34	.08
209-215	93	Pleurisy.....	9	2.05					.49	.11
216-217	94	Pulmonary congestion and pul-monary apoplexy.....								
219	96	Asthma.....	5	1.14					.11	.02
220	97	Pulmonary emphysema.....	1	.23					.16	.04
221	98a	Hæmoptysis.....								
222	98b	Hay fever.....								
224-227	99a	Diseases of the teeth and gums....	28	6.37					.69	.16
228-231	99b	Other diseases of the mouth and annexa.....	5	1.14					.07	.02
232-236	100	Diseases of the pharynx.....	139	31.63					2.01	.46
238	102	Ulcer of stomach.....	8	1.82			1	.21	1.43	.33
239-244	103	Other diseases of stomach (cancer excepted).....	57	12.97					.88	.20
245-253	105	Diarrhea and enteritis.....	172	39.14					3.68	.84
254	106	Ankylostomiasis.....								
255-259	107	Intestinal parasites.....	2	.46					.01	.00
260	108	Appendicitis.....	60	13.65					4.26	.97
261-263	109	Hernia.....	13	2.96					1.53	.35
264-267	110a	Diseases of the anus and fecal fistula.....	9	2.05					.60	.14
268-272	110b	Other diseases of the intestines.....	88	20.03					1.95	.45
275	113	Cirrhosis of liver.....	1	.23					.20	.05
276	114	Biliary calculi.....								
277-281	115	Other diseases of liver and gall bladder.....	17	3.87					1.21	.28
283-284	117	Simple peritonitis.....								
288	119	Acute nephritis.....	5	1.14					.24	.05
289-291	120	Bright's disease.....	17	3.87					2.73	.62
293-299	122	Other diseases of the kidney and annexa.....	7	1.59					.62	.14
303-306	124	Diseases of the bladder.....	6	1.37					.26	.06
304	124b	Enuresis.....								
307-309	126	Diseases of the urethra, urinary abscess, etc.....	4	.91					.17	.04
310-312	126	Diseases of the prostate.....	2	.46					.54	.12
313-319	127	Diseases of the male genital organs (nonvenereal).....	10	2.28					.23	.05
322-323	143	Furuncle and carbuncle.....	39	8.87					.72	.16
324-325	144	Acute abscess and cellulitis.....	28	6.38					.78	.18
352-357	146	Diseases of the bones.....	12	2.73					1.35	.31
358-360	147	Diseases of the joints.....	18	4.10					1.50	.34
367	147g	Flat foot.....	3	.68					.17	.04
372	150	Congenital malformations.....	4	.91					6.71	.04
373-374	154	Senility.....								
375	189Aa	Febricula, simple continued, and other fevers of undetermined causation.....	8	1.82					.12	.03
379	189Ba	Under observation, undiagnosed and unknown.....	15	3.41			1	.21	2.77	.63
380	189Bb	Malingering.....								

ratios per 1,000 of mean strength, for the Army; separately for officers, total enlisted (including troops) and grand total, year 1915—Continued.

TABLE NO. 68½.—Admissions to sick report, discharges, deaths, and noneffectiveness, with
ing American, Porto Rican, and Philippine

Serial Nos.	Inter-national classification.		Officers, Army.							
		Mean strength.....	S. G. O., 4,394—A. G. O., 4,873.							
		Causes of admission to sick report.	Admis-sions.		Discharges.		Deaths.		Noneffec-tive.	
			Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
		AFFECTIONS PRODUCED BY EXTER-NAL CAUSES.								
426-434	155-163	Suicides, all.....					3	0.62		
435	164	Poisoning by food.....	12	2.73						
436	165a	Venomous bites and stings.....	2	.46						
437	165b	Other poisoning (deleterious gases excepted).....								
438	166	Conflagration.....								
439	167	Burns (conflagrations excepted)....	8	1.82						
440	168	Absorption of deleterious gases.....								
441	168a	Suffocation, strangulation.....								
442	169	Drowning, accidental.....								
443	170	Traumatism by firearms (other than specified).....	5	1.14						
444	170a	Shot by sentry or guard.....								
445	171	Traumatism by cutting or piercing instruments.....	12	2.73						
446	172	Traumatism by fall.....	121	28.22			1	.21		
448	174	Traumatism by machines.....	1	.23						
449	175	Traumatism by other crushing.....	20	4.55			3	.62		
450	176	Injuries by animal.....	38	8.65						
452	178	Effects of excessive cold.....								
453	179	Effects of heat.....	5	1.14						
455	181	Effects of electricity.....								
456-458	182-184	Homicides, all.....								
459	185	Fractures, causes not specified.....								
460	186	Other external violence.....	115	26.17						
462-466	.....	Killed or wounded in action.....	2	.46						
462	.....	By bullet.....	2	.46						
		DISEASES AND INJURIES GROUPED.								
		General diseases.....	540	122.89			2	.41	23.11	5.26
	1-19	Epidemic diseases.....	469	106.74					11.05	2.51
	20-59	Other general diseases.....	71	16.16			2	.41	12.06	2.75
		Diseases of the nervous system and organs of special sense.....	197	44.83			1	.21	14.73	3.35
	60-74	Of the nervous system.....	123	27.99			1	.21	11.46	2.61
	75	Of the eye and its annexa.....	56	12.74					1.91	.43
	76	Of the ear and its annexa.....	18	4.10					1.36	.31
	77-85	Diseases of the circulatory system..	55	12.52			2	.41	3.49	.79
	86-98	Diseases of the respiratory system..	363	82.61			2	.41	6.64	1.51
	99-118	Diseases of the digestive system...	604	137.46			3	.62	18.79	4.28
	119-127	Diseases of the genito-urinary sys-tem.....	68	15.47					5.45	1.24
	142-145	Diseases of the skin and cellular tissue.....	113	25.72					2.73	.62
	146-149	Diseases of the organs of locomo-tion.....	107	24.35					6.71	1.53
	150	Malformations, etc.....	4	.91					.09	.02
	154	Diseases, results of old age.....								
	189	Ill-defined diseases.....	28	6.37			1	.21	2.91	.66
		Total for disease.....	2,079	473.15			11	2.26	84.65	19.27
	155-186	External causes.....	351	79.88			7	1.44	18.93	4.31
		Total for disease and external causes.....	2,430	553.03			18	3.69	103.58	23.57

ratios per 1,000 of mean strength, for the Army; separately for officers, total enlisted (including troops) and grand total, year 1915—Continued.

Army, enlisted men (including Porto Rican troops and Philippine Scouts).								Army (entire), officers and enlisted men (including Porto Rican troops and Philippine Scouts).							
S. G. O., 99,448—A. G. O., 100,915.								S. G. O., 103,842—A. G. O., 105,788.							
Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.	
Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
13	0.13			51	0.51			13	0.13			54	0.51		
323	3.25			1	.01			335	3.23			1	.01		
100	1.01							102	.98						
54	.54			5	.05			54	.52			5	.05		
2	.02							2	.02						
399	4.01	3	0.03	1	.01			407	3.92	3	0.03	1	.01		
2	.02							2	.02						
4	.04			3	.03			4	.04			3	.03		
				34	.34							34	.32		
283	2.85	28	.28	13	.13			288	2.77	28	.28	13	.12		
5	.05			2	.02			5	.05			2	.02		
1,054	10.60	6	.06	2	.02			1,066	10.26	6	.06	2	.02		
3,515	35.35	28	.28	8	.08			3,639	35.04	28	.28	9	.09		
78	.78	2	.02					79	.76	2	.02				
640	6.44	24	.24	26	.26			660	6.35	24	.24	29	.27		
1,154	11.60	9	.09	4	.04			1,192	11.48	9	.09	4	.04		
10	.10							10	.10						
142	1.43			1	.01			147	1.42			1	.01		
1	.01			1	.01			1	.01			1	.01		
9	.09			23	.23			9	.09			23	.22		
3	.03							3	.03						
5,094	51.22	14	.14	10	.10			5,209	50.16	14	.14	10	.09		
19	.19	3	.03	11	.11			21	.20	3	.03	11	.10		
19	.19	3	.03	11	.11			21	.20	3	.03	11	.10		
23,140	232.68	368	3.65	101	1.00	968.41	9.74	23,680	228.04	368	3.65	103	.97	991.52	9.55
10,362	104.20	16	.16	35	.35	254.52	2.56	10,831	104.30	16	.16	35	.33	265.58	2.56
12,778	128.49	352	3.49	66	.65	713.88	7.18	12,849	123.73	352	3.49	68	.64	725.95	6.99
3,023	30.40	515	5.11	25	.24	208.34	2.10	3,220	31.00	515	5.11	26	.25	223.07	2.15
1,326	13.33	469	4.65	25	.24	151.17	1.52	1,449	13.95	469	4.65	26	.25	162.62	1.57
1,047	10.53	26	.26			34.32	.35	1,103	10.62	26	.26			36.23	.35
650	6.54	20	.20			22.86	.23	668	6.43	20	.20			24.22	.23
1,789	17.99	65	.64	37	.37	93.54	.94	1,844	17.76	65	.64	39	.37	97.03	.93
5,847	58.80	41	.41	41	.41	141.68	1.42	6,210	59.80	41	.41	43	.41	148.32	1.43
16,080	161.69	55	.55	32	.32	331.21	3.33	16,684	160.66	55	.55	35	.33	349.99	3.37
963	9.68	53	.53	17	.17	50.78	.51	1,031	9.93	53	.53	17	.16	56.23	.54
5,851	58.83	8	.08	2	.02	144.10	1.45	5,964	57.42	8	.08	2	.02	146.84	1.41
2,434	24.48	168	1.66	1	.01	120.27	1.21	2,541	24.47	168	1.66	1	.01	126.98	1.22
372	3.74	2	.02			11.16	.11	376	3.62	2	.02			11.25	.11
2	.02					.03	.00	2	.02					.03	.00
416	4.18			1	.01	10.74	.11	444	4.28			2	.02	13.66	.13
59,917	602.50	1,275	12.63	257	2.55	2,080.26	20.92	61,996	597.02	1,275	12.63	268	2.53	2,164.91	20.85
13,062	131.35	144	1.43	196	1.94	434.79	4.37	13,413	129.16	144	1.43	203	1.92	453.72	4.37
72,979	733.84	1,419	14.06	453	4.49	2,515.04	25.29	75,409	726.19	1,419	14.06	471	4.45	2,618.63	25.22

TABLE NO. 69.—Admissions to sick report, discharges, deaths, and noneffectiveness, with year

Serial Nos.	Inter-national classification.	Mean strength.....	Officers, Army.							
			S. G. O., 4,394—A. G. O., 4,873.							
			Admissions.		Discharges.		Deaths.		Noneffective.	
			Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
1	1	Typhoid fever.....	1	0.23					0.30	0.97
2	1a	Paratyphoid fever.....	1	.23					.10	.32
7-11	4	Malaria.....	53	12.06					2.18	.90
7		Estivo-autumnal fever.....	12	2.73					.63	.14
8		Malarial cachexia.....	4	.91					.40	.09
9		Quartan malarial fever.....								
10		Tertian malarial fever.....	29	6.60					.97	.23
11		Undetermined malarial fever..	8	1.82					.18	.04
12	5	Smallpox and varioloid.....								
13	5b	Vaccinia.....								
14	6	Measles.....	2	.46					.10	.03
15	7	Scarlet fever.....	2	.46					.11	.03
17	9	Diphtheria.....	5	1.14					.18	.04
18	10	Influenza.....	266	60.54					3.50	.89
20	13	Cholera nostras.....								
21-23	14	Dysentery.....	26	5.92					2.06	.47
21		Bacillary.....	1	.23					.03	.01
22		Entamoebic.....	22	5.01					1.93	.44
23		Unclassified.....	3	.68					.10	.03
27	18	Erysipelas.....	1	.23					.08	.01
29	19b	Dengue.....	92	20.94					1.66	.35
31	19d	German measles.....	1	.23					.03	.01
34	19g	Mumps.....	7	1.59					.24	.06
37	20	Purulent infection and septicemia	1	.23			1	0.21	.03	.01
42-46	25	Mycoses.....								
49-57	28-34	Tuberculosis, all.....	8	1.82					6.81	1.55
49-51	28	Tuberculosis of lungs.....	7	1.60					6.65	1.51
52	29	Miliary tuberculosis, acute.....								
53-57	30-34	Tuberculosis of other organs...	1	.23					.17	.04
59-74	37-38	Venereal diseases, all.....	20	4.55					2.43	.55
59-64	37	Syphilis.....	8	1.82					1.75	.40
65-67	38a	Soft chancre.....	2	.46					.17	.04
68-74	38b	Gonococcus infection.....	10	2.28					.51	.12
75-79	39-45	Cancer and other malignant tumors	1	.23			1	.21	.04	.01
80	46	Benign tumors.....	1	.23					.39	.09
81-85	47-48	Rheumatism, articular, all.....	16	3.64					1.21	.28
81-82	47	Acute articular rheumatism...	11	2.50					.47	.11
83-85	48	Chronic articular rheumatism..	5	1.14					.73	.17
87-88	50	Diabetes.....	2	.46					.11	.03
89	51	Exophthalmic goitre.....	1	.23					.15	.03
97-100	56	Alcoholism and results.....	20	4.55					.68	.15
101-102	57-58	Chronic occupational poisoning...								
103-104	59	Other chronic poisoning, including drug habit.....								
107	61	Simple meningitis.....								
108	61a	Epidemic cerebrospinal meningitis.								
109	62	Locomotor ataxia.....	1	.23					.20	.05
110-115	63	Other diseases of spinal cord.....	2	.46					.65	.15
116	64	Cerebral hemorrhage, apoplexy....	1	.23			1	.21	.27	.06
117-119	66	Paralysis without specified cause...	3	.68					.42	.10
120-126	67-68	Mental alienation.....	8	1.82					.84	.19
127	69	Epilepsy.....	3	.68					.60	.16
129-133	73	Neuralgia and neuritis.....	51	11.61					3.37	.77
138-141	75a	Conjunctivitis.....	20	4.55					.36	.08
142	75b	Trachoma.....	1	.23					.12	.03
166	77	Pericarditis.....								
167	78	Acute endocarditis.....								
169-174	79	Organic heart disease.....	10	2.28			2	.41	.64	.15
175	80	Angina pectoris.....	1	.23					.01	.01
176-177	81	Diseases of the arteries, atheroma, aneurism, etc.....	4	.91					.52	.12
178-179	82	Embolism and thrombosis.....								
181	83b	Hemorrhoids.....	29	6.60					1.69	.38
183	83d	Varicose veins.....	3	.68					.18	.04
184	83e	Varicocele.....	1	.23					.03	.01
185-187	84	Diseases of the lymphatic system..	4	.91					.11	.03
193-199	86	Diseases of the nasal fossae.....	130	29.59					1.71	.39
200-202	87	Diseases of the larynx.....	20	4.55					.29	.07

ratios per 1,000 of mean strength, for the Army, officers and American troops for the 1915.

American troops, Army.										Officers and American troops, Army.									
2,113	22.66			2	0.02	45.06	.48	2,166	22.18			2	0.02	47.26	.48				
535	5.74			2	.02	13.57	.15	547	5.60			2	.02	14.20	.15				
8	.09					.61	.01	12	.12					1.01	.01				
15	.16					.26	.00	15	.15					.26	.00				
1,421	15.24					27.89	.30	1,450	14.83					28.85	.30				
134	1.44					2.76	.03	142	1.45					2.96	.03				
4	.04					.32	.00	4	.04					.32	.00				
371	3.98					4.66	.05	371	3.80					4.66	.05				
633	6.79	8	0.08	23	.23	39.03	.42	635	6.50	8	0.08	23	.22	39.13	.40				
50	.54			1	.01	4.76	.06	52	.53			1	.01	4.89	.05				
61	.65			1	.01	2.62	.03	65	.68			1	.01	2.81	.03				
3,196	34.27			4	.04	43.03	.46	3,463	35.45			4	.04	46.53	.48				
1	.01					.01	.00	1	.01					.01	.00				
183	1.96	8	.05	2	.02	14.60	.16	209	2.14	8	.05	2	.02	15.65	.17				
17	.18					.87	.01	18	.18					.90	.01				
138	1.43	8	.05	2	.02	12.56	.13	160	1.64	8	.05	2	.02	14.48	.15				
28	.30					1.18	.01	31	.32					1.28	.01				
23	.25	1	.01	1	.01	.84	.01	24	.25	1	.01	1	.01	.90	.01				
1,629	17.47					24.49	.26	1,721	17.62					26.15	.27				
75	.80					3.27	.04	76	.78					3.30	.03				
968	10.27					44.61	.46	965	9.88					44.85	.46				
7	.08			7	.07	.19	.00	8	.08			8	.08	.21	.00				
2	.02					.04	.00	2	.02					.04	.00				
328	3.52	170	1.79	31	.33	167.97	1.80	336	3.44	170	1.79	31	.31	174.78	1.79				
299	3.20	160	1.69	23	.24	161.48	1.73	306	3.13	160	1.69	23	.23	165.13	1.72				
4	.04			4	.04	.61	.01	4	.04			4	.04	.61	.01				
25	.26	10	.10	4	.04	5.88	.06	26	.27	10	.10	4	.04	6.04	.06				
10,045	107.71	78	.82	6	.06	445.42	4.78	10,065	103.07	78	.82	6	.06	447.85	4.59				
1,992	21.36	47	.50	4	.04	125.23	1.34	2,000	20.49	47	.50	4	.04	126.98	1.30				
2,186	23.44	2	.02			81.24	.87	2,188	22.41	2	.02			81.41	.83				
5,967	62.91	29	.31	2	.02	238.95	2.56	5,877	60.18	29	.31	2	.02	239.46	2.45				
22	.24	8	.05	9	.10	4.70	.05	23	.24	8	.05	10	.10	4.80	.05				
119	1.28			1	.01	3.24	.03	120	1.23			1	.01	3.63	.04				
542	5.82	19	.20			37.49	.41	558	5.71	19	.20			38.70	.40				
451	4.84	6	.05			26.60	.29	462	4.73	5	.05			27.07	.28				
91	.96	14	.15			10.89	.12	96	.99	14	.15			11.62	.12				
14	.15	2	.02	4	.04	1.67	.02	16	.16	2	.02	4	.04	1.78	.02				
24	.26	10	.11			6.22	.07	25	.26	10	.11			6.37	.07				
1,294	13.67	24	.25	6	.06	19.90	.21	1,314	13.46	24	.25	6	.06	20.58	.21				
4	.04					.44	.00	4	.04					.44	.00				
44	.47	9	.10			3.38	.04	44	.45	9	.10			3.38	.03				
2	.02	2	.02	1	.01	1.05	.01	2	.02	2	.02	1	.01	1.05	.01				
26	.28	7	.07	10	.11	3.90	.04	26	.27	7	.07	10	.10	3.90	.04				
12	.13	3	.03			2.74	.03	13	.13	3	.03			2.94	.03				
9	.10	5	.05	1	.01	2.47	.03	11	.11	5	.05	1	.01	3.12	.03				
8	.09			7	.07	.17	.00	9	.09			8	.08	.44	.00				
26	.27	4	.04			2.55	.03	28	.29	4	.04			2.97	.03				
368	3.84	313	3.30	5	.05	83.69	.90	366	3.75	313	3.30	5	.05	84.53	.87				
114	1.22	65	.69			14.62	.16	117	1.20	65	.69			15.31	.16				
482	5.17	23	.24			23.87	.25	533	5.48	23	.24			26.24	.27				
383	4.13	2	.02			8.13	.09	405	4.15	2	.02			8.49	.09				
15	.16	1	.01			1.45	.02	16	.16	1	.01			1.58	.02				
5	.05					.39	.00	5	.05					.39	.00				
9	.10	2	.02	3	.03	.79	.01	9	.09	2	.02	3	.03	.79	.01				
105	1.12	47	.50	22	.23	15.90	.17	115	1.18	47	.50	24	.24	16.54	.17				
16	.11	1	.01	2	.02	.27	.00	11	.11	1	.01	2	.02	.28	.00				
14	.15	4	.04	6	.06	2.70	.03	18	.18	4	.04	6	.06	3.21	.03				
3	.03	2	.02	1	.01	.76	.01	3	.03	2	.02	1	.01	.76	.01				
547	5.86					15.78	.17	576	5.90					17.47	.18				
63	.66	2	.02			3.90	.04	66	.68	2	.02			4.08	.04				
245	2.63	2	.02			12.74	.14	246	2.62	2	.02			12.77	.13				
327	6.72	2	.02			33.46	.36	331	6.46	2	.02			33.57	.34				
1,416	15.16	2	.02			22.09	.24	1,543	15.83	2	.02			23.80	.24				
285	2.52	1	.01			4.57	.05	255	2.61	1	.01			4.64	.05				

TABLE No. 69.—Admissions to sick report, discharges, deaths, and noneffectiveness, with 1915—

Serial Nos.	Inter-national classification.	Mean strength.....	Officers, Army.								
			S. G. O., 4,394—A. G. O., 4,873.								
			Admissions.		Discharges.		Deaths.		Noneffective.		
			Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	
Causes of admission to sick report.											
203-204	88	Diseases of the thyroid body.....									
205-206	89-90	Bronchitis.....	186	42.33					2.94	0.67	
207	91	Broncho-pneumonia.....	6	1.37					.63	.14	
208	92	Pneumonia.....	5	1.14			2	0.41	.34	.08	
209-215	93	Pleurisy.....	9	2.05					.49	.11	
216-217	94	Pulmonary congestion and pulmonary apoplexy.....									
219	96	Asthma.....	5	1.14					.11	.03	
220	97	Pulmonary emphysema.....	1	.23					.16	.04	
221	98a	Haemoptysis.....									
222	98b	Hay fever.....									
224-227	99a	Diseases of the teeth and gums....	28	6.37					.69	.16	
228-231	99b	Other diseases of the mouth and annexa.....	5	1.14					.07	.02	
232-236	100	Diseases of the pharynx.....	139	31.63					2.01	.46	
238	102	Ulcer of stomach.....	8	1.82			1	.21	1.43	.33	
239-244	103	Other diseases of stomach (cancer excepted).....	57	12.97					.88	.20	
245-253	105	Diarrhea and enteritis.....	172	39.14					3.68	.84	
254	106	Ankylostomiasis.....									
255-259	107	Intestinal parasites.....	2	.46					.01	.00	
260	108	Appendicitis.....	60	13.65					4.25	.97	
261-263	109	Hernia.....	13	2.96					1.53	.35	
264-267	110a	Diseases of the anus and fecal fistula.....	9	2.05					.60	.14	
268-272	110b	Other diseases of the intestines....	88	20.03					1.96	.45	
275	113	Cirrhosis of liver.....	1	.23					.20	.05	
276	114	Biliary calculi.....	3	.68					.24	.06	
277-281	115	Other diseases of liver and gall bladder.....	17	3.87					1.21	.28	
283-284	117	Simple peritonitis.....									
288	119	Acute nephritis.....	5	1.14					.24	.06	
289-291	120	Bright's disease.....	17	3.87					2.73	.63	
293-299	122	Other diseases of the kidney and annexa.....	7	1.59					.62	.14	
303-306	124	Diseases of the bladder.....	6	1.37					.26	.06	
304	124b	Enuresis.....									
307-309	125	Diseases of the urethra, urinary abscess, etc.....	4	.91					.17	.04	
310-312	126	Diseases of the prostate.....	2	.46					.54	.12	
313-319	127	Diseases of the male genital organs (nonvenereal).....	10	2.23					.23	.06	
322-323	143	Furuncle and carbuncle.....	39	8.87					.72	.16	
324-325	144	Acute abscess and cellulitis.....	28	6.38					.78	.18	
352-357	146	Diseases of the bones.....	12	2.73					1.35	.31	
358-360	147	Diseases of the joints.....	18	4.10					1.50	.34	
367	149g	Flat foot.....	3	.68					.17	.04	
372	150	Congenital malformations.....	4	.91					.09	.02	
373-374	154	Senility.....									
375	189Aa	Febricula, simple continued, and other fevers of undetermined causation.....	8	1.82					.12	.03	
379	189Ba	Under observation, undiagnosed, and unknown.....	15	3.41			1	.21	2.77	.63	
380	189Bb	Malingering.....									
		AFFECTIONS PRODUCED BY EXTERNAL CAUSES. ¹									
426-434	155-163	Suicides, all.....					3	.62			
435	164	Poisoning by food.....	12	2.73							
436	165a	Venomous bites and stings.....	2	.46							
437	165b	Other poisoning (deleterious gases excepted).....									
439	167	Burns (conflagrations excepted)....	8	1.82							
440	168	Absorption of deleterious gases.....									
441	168a	Suffocation, strangulation.....									

¹ Noneffectiveness for individual external causes not tabulated.

ratios per 1,000 of mean strength, for the Army, officers and American troops for the year
Continued.

TABLE No. 69.—Admissions to sick report, discharges, deaths, and noneffectiveness, with 1915—

Serial Nos.	Inter- na- tional classifi- cation.	Officers, Army.							
		Mean strength.....	S. G. O., 4,394—A. G. O., 4,873.						
		Causes of admission to sick report.	Admissions.		Discharges.		Deaths.		Noneflec- tive.
			Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number. Ratio.
		AFFECTIONS PRODUCED BY EX- TERNAL CAUSES—continued.							
442	169	Drowning, accidental.....							
443	170	Traumatism by firearms (other than specified).....	5	1.14					
444	170a	Shot by sentry or guard.....							
445	171	Traumatism by cutting or piercing instruments.....	12	2.73					
446	172	Traumatism by fall.....	124	28.22			1	0.21	
448	174	Traumatism by machines.....	1	.23					
449	175	Traumatism by other (crushing).....	20	4.55			3	.62	
450	176	Injuries by animals.....	38	8.65					
452	178	Effects of excessive cold.....							
453	179	Effects of heat.....	5	1.14					
455	181	Effects of electricity.....							
456-458	182-4	Homicides, all.....							
460	186	Other external violence.....	115	26.17					
462-466		Killed or wounded in action.....	2	.46					
462		By bullet.....	2	.46					
		DISEASES AND INJURIES GROUPED.							
		General diseases.....	540	122.89			2	.41	25.11 5.26
1-19		Epidemic diseases.....	469	106.74					11.05 2.51
20-59		Other general diseases.....	71	16.16			2	.41	12.06 2.75
		Diseases of the nervous system and organs of special sense.....	197	44.83			1	.21	14.73 3.25
60-74		Of the nervous system.....	123	27.99			1	.21	11.46 2.61
75		Of the eye and its annexa.....	56	12.74					1.91 .43
76		Of the ear and its annexa.....	18	4.10					1.36 .31
77-85		Diseases of the circulatory system.....	55	12.52			2	.41	3.49 .78
86-98		Diseases of the respiratory system.....	363	82.61			2	.41	6.64 1.51
99-118		Diseases of the digestive system.....	604	137.46			3	.62	18.79 4.26
119-127		Diseases of the genito-urinary sys- tem.....	68	15.47					5.45 1.24
142-145		Diseases of the skin and cellular tissue.....	113	25.72					2.73 .62
146-149		Diseases of the organs of locomotion.....	107	24.35					6.71 1.52
150		Malformations, etc.....	4	.91					.09 .02
154		Diseases, results of old age.....							
180		Ill-defined diseases.....	28	6.37			1	.21	2.91 .66
		Total for disease.....	2,079	473.15			11	2.26	84.65 19.37
155-186		External causes.....	351	79.88			7	1.44	18.93 4.31
		Total for disease and external causes.....	2,430	553.03			18	3.69	103.58 23.57

ratios per 1,000 of mean strength, for the Army, officers and American troops for the year
Continued.

American troops, Army.								Officers and American troops, Army.							
S. G. O., 93,262—A. G. O., 94,720.								S. G. O., 97,656—A. G. O., 99,602.							
Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.	
Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
				34	0.36							34	0.34		
275	2.95	27	0.29	12	.13			280	2.87	27	0.29	12	.12		
5	.05			2	.02			5	.05			2	.02		
986	10.57	6	.06	1	.01			998	10.22	6	.06	1	.01		
3,372	36.16	26	.27	8	.08			3,496	35.80	26	.27	9	.09		
76	.81	2	.02					77	.79	2	.02				
621	6.66	24	.25	26	.27			641	6.56	24	.25	29	.29		
1,150	12.33	9	.10	4	.04			1,188	12.16	9	.10	4	.04		
10	.11							10	.10						
127	1.36							132	1.35						
1	.01			1	.01			1	.01			1	.01		
7	.07			21	.22			7	.07			21	.21		
4,845	51.92	14	.15	10	.11			4,960	50.79	14	.15	10	.10		
18	.19	1	.01	11	.12			20	.20	1	.01	11	.11		
18	.19	1	.01	11	.12			20	.20	1	.01	11	.11		
22,101	236.98	337	3.56	98	1.03	929.50	9.97	22,641	231.84	337	3.56	100	1.00	952.61	9.75
9,626	103.21	14	.15	33	.35	234.47	2.51	10,095	103.37	14	.15	33	.33	245.52	2.51
12,475	133.76	323	3.41	65	.69	695.03	7.45	12,546	128.47	323	3.41	67	.67	707.10	7.24
2,854	30.60	493	5.20	24	.25	202.50	2.17	3,051	31.24	493	5.20	25	.25	217.23	2.22
1,290	13.83	449	4.74	24	.25	148.20	1.59	1,413	14.47	449	4.74	25	.25	159.66	1.63
940	10.08	24	.25			32.02	.34	996	10.20	24	.25			33.93	.35
624	6.69	20	.21			22.28	.24	642	6.57	20	.21			23.64	.24
1,739	18.65	64	.68	34	.36	91.13	.98	1,794	18.37	64	.68	36	.36	94.61	.97
5,600	60.04	38	.40	40	.42	135.48	1.45	5,963	61.06	38	.40	42	.42	142.12	1.46
15,316	161.22	54	.57	30	.32	319.93	3.43	15,920	163.03	54	.57	33	.33	338.72	3.47
927	9.94	53	.56	16	.17	49.57	.53	995	10.19	53	.56	16	.16	55.02	.56
5,283	56.65	7	.07	2	.02	126.49	1.36	5,396	55.25	7	.07	2	.02	129.21	1.32
2,357	25.27	165	1.74	1	.01	117.46	1.26	2,464	25.23	165	1.74	1	.01	124.17	1.27
367	3.94	1	.01			10.99	.12	371	3.80	1	.01			11.08	.11
2	.02					.03	.00	2	.02					.03	.00
374	4.01			1	.01	9.67	.10	402	4.12			2	.02	12.58	.13
56,920	610.32	1,212	12.79	246	2.60	1,992.74	21.37	58,999	604.15	1,212	12.79	257	2.58	2,077.39	21.27
12,522	134.27	136	1.47	190	2.01	420.47	4.51	12,873	131.82	139	1.47	197	1.98	439.41	4.50
69,442	744.59	1,351	14.26	436	4.60	2,413.21	25.88	71,872	735.97	1,351	14.26	454	4.56	2,516.80	25.77

TABLE No. 70.—Admissions to sick report, discharges, deaths, and noneffectiveness, with colored,

Serial No.	International classification.	Causes of admission to sick report.	Army, American troops, white and colored.							
			S. G. O., 93,262—A. G. O., 94,729.							
			Admissions.		Discharges.		Deaths.		Noneffective.	
			Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
1	1	Typhoid fever.....	7	0.08					1.33	0.01
2	1a	Paratyphoid fever.....	6	.06					.94	.01
7-11	4	Malaria.....	2,113	22.66			20.02		45.03	.43
7		Estivo-autumnal fever.....	535	5.74			2.02		13.57	.15
8		Malarial cachexia.....	8	.09					.61	.01
9		Quartan malarial fever.....	15	.16					.25	.00
10		Tertian malarial fever.....	1,421	15.24					27.88	.30
11		Undetermined malarial fever..	134	1.44					2.76	.03
12	5	Smallpox and varioloid.....	4	.04					.32	.00
13	5b	Vaccinia.....	371	3.98					4.06	.05
14	6	Measles.....	633	6.79	8	0.08	23	.23	39.03	.42
15	7	Scarlet fever.....	50	.54			1	.01	4.78	.05
17	9	Diphtheria.....	61	.65			1	.01	2.62	.03
18	10	Influenza.....	3,196	34.27			4	.04	43.03	.46
20	13	Cholera nostras.....	1	.01					.01	.00
21-23	14	Dysentery.....	183	1.96	5	.05	2	.02	14.00	.14
21		Bacillary.....	17	.18					.87	.01
22		Entamoebic.....	138	1.48	5	.05	2	.02	12.55	.13
23		Unclassified.....	28	.30					1.18	.01
27	18	Erysipelas.....	23	.25	1	.01	1	.01	.84	.01
29	19b	Dengue.....	1,629	17.47					24.49	.26
31	19d	German measles.....	75	.80					3.27	.04
34	19g	Mumps.....	958	10.27					44.61	.45
37	20	Purulent infection and septicemia.	7	.08			7	.07	.19	.00
42-46	25	Mycoses.....	2	.02					.04	.00
49-57	28-34	Tuberculosis, all.....	328	3.52	170	1.79	31	.33	167.97	1.80
49-51	28	Tuberculosis of lungs.....	299	3.20	160	1.69	23	.24	161.48	1.73
52	29	Miliary tuberculosis, acute....	4	.04			4	.04	.61	.01
53-57	30-34	Tuberculosis of other organs...	25	.27	10	.10	4	.04	5.88	.06
59-74	37-38	Venereal diseases, all.....	10,045	107.71	79	.83	6	.06	445.42	4.78
59-64	37	Syphilis.....	1,902	21.26	47	.50	4	.04	127.23	1.34
65-67	38a	Soft chancre.....	2,186	23.44	2	.02			81.24	.87
68-74	38b	Gonococcus infection.....	5,867	62.91	29	.31	2	.02	238.95	2.56
75-79	39-45	Cancer and other malignant tumors.	22	.24	5	.05	9	.10	4.76	.05
80	46	Benign tumors.....	119	1.28			1	.01	3.24	.03
81-85	47-48	Rheumatism, articular, all.....	542	5.82	19	.20			37.49	.41
81-82	47	Acute articular rheumatism...	451	4.84	5	.05			26.60	.28
83-85	48	Chronic articular rheumatism..	91	.98	14	.15			10.89	.12
87-88	50	Diabetes.....	14	.15	2	.02	4	.04	1.67	.02
89	51	Exophthalmic goitre.....	24	.26	10	.11			6.22	.07
97-100	56	Alcoholism and results.....	1,294	13.87	24	.25	6	.06	19.90	.21
101-102	57-58	Chronic occupational poisoning...	4	.04					.44	.00
103-104	59	Other chronic poisoning, including drug habit.	44	.47	9	.10			3.39	.04
107	61	Simple meningitis.....	2	.02	2	.02	1	.01	1.05	.01
108	61a	Epidemic cerebrospinal meningitis.	26	.28	7	.07	10	.11	3.90	.04
109	62	Locomotor ataxia.....	12	.13	3	.03			2.74	.03
110-115	63	Other diseases of spinal cord.....	9	.10	5	.05	1	.01	2.47	.03
116	64	Cerebral hemorrhage, apoplexy....	8	.09			7	.07	.17	.00
117-119	66	Paralysis without specified cause..	25	.27	4	.04			2.55	.03
120-126	67-68	Mental alienation.....	358	3.82	313	3.30	5	.05	83.09	.88
127	69	Epilepsy.....	114	1.22	65	.69			14.62	.15
129-133	73	Neuralgia and neuritis.....	482	5.17	23	.24			22.87	.24
138-141	75a	Conjunctivitis.....	385	4.13	2	.02			8.13	.09
142	75b	Trachoma.....	15	.16	1	.01			1.45	.02
166	77	Pericarditis.....	5	.05					.30	.00
167	78	Acute endocarditis.....	9	.10	2	.02	3	.03	.79	.01
169-174	79	Organic heart disease.....	105	1.13	47	.50	22	.23	15.90	.17
175	80	Angina pectoris.....	10	.11	1	.01	2	.02	.27	.00
176-177	81	Diseases of the arteries, atheroma, aneurism, etc.	14	.15	4	.04	6	.06	2.79	.03
178-179	82	Embolism and thrombosis.....	3	.03	2	.02	1	.01	.76	.01
181	83b	Hemorrhoids.....	547	5.86					15.78	.17
183	83d	Varicose veins.....	63	.68	2	.02			3.90	.04
184	83e	Varicocele.....	245	2.63	2	.02			12.74	.14
185-187	84	Diseases of the lymphatic system..	627	6.72	2	.02			32.46	.35

ratios per 1,000 of mean strength, for the Army, American troops, enlisted men, white and year 1915.

TABLE NO. 70.—Admissions to sick report, discharges, deaths, and noneffectiveness, with colored, year

Serial No.	Inter-national classification.	Army, American troops, white and colored.									
		Mean strength.....	S. G. O., 93,262—A. G. O., 94,729.								
			Admissions.		Discharges.		Deaths.		Noneffective.		
			Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	
193-199	86	Diseases of the nasal fossæ.....	1,416	15.18	2	.02			22.09	.24	
200-202	87	Diseases of the larynx.....	235	2.52	1	.01			4.57	.05	
203-204	88	Diseases of the thyroid body.....	24	.26	7	.07			3.49	.04	
205-206	89-90	Bronchitis.....	3,290	35.17	5	.05	1	.01	59.24	.64	
207	91	Broncho-pneumonia.....	53	.57	1	.01	6	.06	4.05	.04	
208	92	Pneumonia.....	225	2.41			20	.31	16.40	.18	
209-215	93	Pleurisy.....	259	2.78	7	.07	3	.03	18.86	.20	
216-217	94	Pulmonary congestion and pulmo-nary apoplexy.....	1	.01					.01	.00	
219	96	Asthma.....	78	.84	14	.15			5.51	.06	
220	97	Pulmonary emphysema.....	2	.02					.08	.00	
221	98a	Hæmoptysis.....	8	.09					.48	.01	
222	98b	Hay fever.....	4	.04					.05	.00	
224-227	99a	Diseases of the teeth and gums....	494	5.30	1	.01			9.12	.10	
228-231	99b	Other diseases of the mouth and annexa.....	84	.90					2.15	.02	
232-236	100	Diseases of the pharynx.....	6,071	65.10	1	.01	1	.01	85.56	.93	
238	102	Ulcer of stomach.....	28	.25	5	.05	1	.01	4.10	.04	
239-244	103	Other diseases of stomach (cancer excepted).....	1,122	12.03	7	.07	2	.02	20.45	.22	
245-253	105	Diarrhea and enteritis.....	2,939	31.51	1	.01	4	.04	38.11	.41	
254	106	Ankylostomiasis.....	41	.44	1	.01			2.64	.03	
255-259	107	Intestinal parasites.....	96	1.03					1.60	.02	
260	108	Appendicitis.....	815	8.74	4	.04	12	.13	58.64	.63	
261-263	109	Hernia.....	353	3.79	19	.20	3	.03	35.00	.38	
264-267	110a	Diseases of the anus and fecal fis-tula.....	76	.81					4.45	.05	
268-272	110b	Other diseases of the intestines....	2,772	29.72	6	.06			35.98	.39	
275	113	Cirrhosis of liver.....	5	.05	1	.01	1	.01	.06	.01	
276	114	Biliary calculi.....	9	.10	1	.01			1.08	.01	
77-281	115	Other diseases of liver and gall bladder.....	389	4.17	2	.02	1	.01	17.33	.19	
283-284	117	Simple peritonitis.....	1	.01			2	.02	.07	.00	
288	119	Acute nephritis.....	32	.34			6	.06	2.09	.02	
289-291	120	Bright's disease.....	54	.58	12	.13	9	.10	9.26	.10	
293-299	122	Other diseases of the kidney and annexa.....	27	.29	1	.01			3.36	.04	
303-306	124	Diseases of the bladder.....	196	2.10	33	.35			13.18	.14	
304	124b	Enuresis.....	109	1.17	33	.35			9.93	.11	
307-309	125	Diseases of the urethra, urinary ab-scess, etc.....	143	1.53	1	.01			4.15	.04	
310-312	126	Diseases of the prostate.....	15	.16	1	.01			1.45	.02	
313-319	127	Diseases of the male genital organs (nonvenereal).....	403	4.32	1	.01			11.89	.12	
322-323	143	Furuncle and carbuncle.....	1,625	17.42					27.50	.30	
324-325	144	Acute abscess and cellulitis.....	1,253	13.44	1	.01	2	.02	31.74	.34	
352-357	146	Diseases of the bones.....	236	2.53	6	.06	1	.01	14.52	.16	
358-360	147	Diseases of the joints.....	382	4.10	23	.24			31.07	.33	
367	149g	Flat foot.....	253	2.71	118	1.25			32.44	.35	
372	150	Congenital malformations.....	367	3.94	1	.01			11.00	.12	
373-374	154	Senility.....	2	.02					.03	.00	
375	189Aa	Febricula, simple continued, and other fevers of undetermined causation.....	186	1.99					3.68	.04	
379	189Ba	Under observation, undiagnosed and unknown.....	79	.85			1	.01	3.97	.04	
380	189Bb	Malingering.....	35	.38					1.05	.01	
AFFECTIONS PRODUCED BY EXTER-NAL CAUSES. ¹											
426-434	155-163	Suicides, all.....	13	.14			50	.53			
435	164	Poisoning by food.....	321	3.44			1	.01			
436	165a	Venomous bites and stings.....	96	1.03							
437	165b	Other poisoning (deleterious gases excepted).....	53	.57			5	.05			
439	167	Burns (conflagrations excepted)...	384	4.12	3	.03	1	.01			

¹Noneffectiveness for individual external causes not tabulated.

ratios per 1,000 of mean strength, for the Army, American troops, enlisted men, white and 1915—Continued.

1,239	15.31	1	0.01		21.00	0.34	77	13.27	1	0.17		1.00	0.17
222	2.54	1	.01		4.23	.05	13	2.24				.34	.06
34	.27	7	.08		3.49	.04							
3,006	35.06	5	.06	1	55.47	.63	214	36.87				2.76	.65
51	.59	1	.01	4	3.97	.05	2	.34		2	.34	.08	.01
206	2.34			27	14.28	.16	20	3.45		2	.34	2.12	.36
241	2.76		.08	3	18.30	.21	18	3.10				.56	.10
1	.01				.01	.00							
74	.85	12	.13		5.26	.06		.60	2	.34		.25	.04
2	.02				.08	.00							
6	.09				.48	.01							
4	.05				.05	.00							
463	5.29	1	.01		8.67	.10	31	5.34				.44	.08
79	.90				2.01	.02	5	.86				.15	.03
5,880	67.24	1	.01	1	86.12	.96	191	32.91				3.18	.55
21	.24	5	.06	1	4.06	.05	2	.34				.05	.01
1,080	11.78	7	.08	1	19.08	.22	92	15.85		1	.17	1.37	.24
2,787	31.87	1	.01	1	36.42	.42	152	26.19				1.09	.29
40	.46	1	.01		2.63	.03	1	.17				.01	.00
92	1.05				1.55	.02	4	.69				.05	.01
773	8.84	4	.04	11	54.88	.63	42	7.24		1	.17	3.76	.65
340	3.89	16	.20	2	33.50	.38	13	2.24	1	.17	1	1.50	.26
66	.75				4.61	.05	10	1.72				.39	.07
2,507	28.67	5	.06		32.88	.37	265	45.66	1	.17		3.40	.59
6	.06	1	.01	1	.46	.01							
9	.10	1	.01		.06	.01							
370	4.23	2	.02	1	16.10	.18	19	3.27				1.24	.21
1	.01			2	.07	.00							
29	.33			5	1.83	.02	3	.52		1	.17	.26	.05
51	.56	12	.13	9	8.91	.10	3	.52				.36	.06
25	.29	1	.01		3.26	.04	2	.34				.10	.02
191	2.18	33	.37		13.11	.15	5	.86				.07	.01
107	1.22	33	.37		9.90	.11	2	.34				.03	.00
124	1.42	1	.01		3.23	.04	19	3.27				.81	.14
14	.16	1	.01		1.45	.02	1	.17				.00	.00
378	4.27	1	.01		11.01	.13	30	6.17				.85	.15
1,875	18.00				26.72	.31	50	8.62				.78	.13
1,183	13.53	1	.01	2	29.76	.34	70	12.06				1.99	.35
217	2.48	5	.06	1	13.71	.16	19	3.27	1	.17		.81	.14
367	4.20	21	.24		29.04	.33	15	2.58	2	.34		2.03	.35
233	2.66	107	1.20		27.57	.32	20	3.45	11	1.90		4.86	.84
324	3.70	1	.01		9.33	.11	11	7.41				1.66	.29
2	.02				.03	.00							
165	1.69				3.23	.04	21	3.62				.45	.08
76	.87			1	3.44	.04	3	.52				.52	.09
30	.34				.98	.01	5	.86				.07	.01
13	.15			50	.54								
269	3.08			1	.01		52	8.90					
95	1.09						1	.17					
50	.87			5	.06		3	.52					
375	4.29	3	.03	1	.01		9	1.55					

TABLE No. 70.—Admissions to sick report, discharges, deaths, and noneffectiveness, with colored, year

Serial No.	Inter-national classification.	Army, American troops, white and colored.								
		Mean strength.....	S. G. O., 93,262—A. G. O., 94,729.							
			Admissions.		Discharges.		Deaths.		Noneffective.	
			Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
		AFFECTIONS PRODUCED BY EXTERNAL CAUSES—continued.								
440	168	Absorption of deleterious gases.....	2	0.02						
441	168a	Suffocation, strangulation.....	3	.03			3	0.03		
442	169	Drowning, accidental.....					34	.36		
443	170	Traumatism by firearms (other than specified).....	275	2.95	27	0.29	12	.13		
444	170a	Shot by sentry or guard.....	5	.05			2	.02		
445	171	Traumatism by cutting or piercing instruments.....	986	10.57	6	.06	1	.01		
446	172	Traumatism by fall.....	3,372	36.16	26	.27	8	.08		
448	174	Traumatism by machines.....	76	.81	2	.02				
449	175	Traumatism by other crushing.....	621	6.66	24	.25	26	.27		
450	176	Injuries by animals.....	1,150	12.33	9	.10	4	.04		
452	178	Effects of excessive cold.....	10	.11						
453	179	Effects of heat.....	127	1.36						
455	181	Effects of electricity.....	1	.01			1	.01		
456-458	182-184	Homicides, all.....	7	.07			21	.22		
460	186	Other external violence.....	4,815	51.92	14	.15	10	.11		
462-466		Killed or wounded in action.....	18	.19	1	.01	11	.12		
462		By bullet.....	18	.19	1	.01	11	.12		
		DISEASES AND INJURIES GROUPED.								
		General diseases.....	22,101	236.98	337	3.56	98	1.03	929.50	9.97
1-19		Epidemic diseases.....	9,628	103.21	14	.15	33	.35	234.47	2.51
20-59		Other general diseases.....	2,475	133.76	323	3.41	65	.69	695.03	7.45
		Diseases of the nervous system and organs of special sense.....	2,854	30.60	493	5.20	24	.25	202.50	2.17
60-74		Of the nervous system.....	1,290	13.83	449	4.74	24	.25	148.20	1.56
75		Of the eye and its annexa.....	910	10.08	24	.25			32.09	.34
76		Of the ear and its annexa.....	624	6.69	20	.21			22.28	.24
77-85		Diseases of the circulatory system..	1,739	18.65	64	.68	34	.36	91.13	.98
86-98		Diseases of the respiratory system..	5,600	60.04	38	.40	40	.42	135.48	1.46
99-118		Diseases of the digestive system....	15,316	164.22	54	.57	30	.32	319.93	3.43
119-127		Diseases of the genito-urinary system.....	927	9.94	53	.56	16	.17	49.57	.53
142-145		Diseases of the skin and cellular tissue.....	5,283	56.65	7	.07	2	.02	126.49	1.36
146-149		Diseases of the organs of locomotion	2,357	25.27	165	1.74	1	.01	117.46	1.26
150		Malformations, etc.....	337	3.94	1	.01			10.99	.12
154		Diseases, results of old age.....	2	.02					.03	.00
189		Ill-defined diseases.....	374	4.01			1	.01	9.67	.10
		Total for disease.....	56,920	610.32	1,212	12.79	246	2.60	1,992.74	21.37
155-186		External causes.....	12,522	134.27	139	1.47	190	2.01	420.47	4.51
		Total for disease and external causes.....	69,442	744.59	1,351	14.26	436	4.60	2,413.21	25.88

ratios per 1,000 of mean strength, for the Army, American troops, enlisted men, white and 1915—Continued.

Army, American troops, white.								Army, American troops, colored.							
S. G. O., 87,458—A. G. O., 88,925.								S. G. O., 5,804—A. G. O., 5,804.							
Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.	
Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	umber.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
2	0.02														
3	.03			3	0.03										
				33	.37							1	0.17		
257	2.94	25	0.28	11	.12			18	3.10	2	0.34	1	.17		
4	.06			2	.02			1	.17						
921	10.53	5	.06	1	.01			65	11.20	1	.17				
3,167	36.21	24	.27	8	.09			205	35.32	2	.34				
71	.81	2	.02					5	.86						
600	6.86	23	.26	24	.27			21	3.62	1	.17	2	.34		
1,071	12.25	8	.09	4	.04			79	13.61	1	.17				
10	.11														
124	1.42							3	.52						
1	.01			1	.01										
4	.05			19	.21			3	.52			2	.34		
4,585	52.43	14	.16	10	.11			260	44.80						
17	.19	1	.01	11	.12			1	.17						
17	.19	1	.01	11	.12			1	.17						
20,531	234.75	312	3.51	88	.99	861.34	9.85	1,570	270.51	25	4.31	10	1.72	68.16	11.74
8,949	102.32	14	.16	33	.37	221.11	2.53	677	116.64					13.36	2.30
11,582	132.43	298	3.35	55	.62	640.24	7.32	893	153.86	25	4.31	10	1.72	54.80	9.44
2,691	30.77	458	5.14	23	.26	188.12	2.14	163	28.09	35	6.03	1	.17	14.38	2.48
1,211	13.85	418	4.70	23	.26	137.73	1.57	79	13.61	31	5.34	1	.17	10.47	1.80
872	9.97	20	.22			28.37	.32	68	11.72	4	.69			3.65	.63
608	6.95	20	.22			22.01	.25	16	2.76					.26	.05
1,618	18.50	60	.67	27	.30	85.25	.97	121	20.85	4	.69	7	1.21	5.87	1.01
5,252	60.06	35	.39	36	.40	127.37	1.46	348	59.96	3	.52	4	.69	8.12	1.40
14,489	165.68	52	.58	27	.30	302.68	3.46	827	142.50	2	.34	3	.52	17.24	2.97
864	9.88	53	.60	15	.17	47.09	.54	63	10.86			1	.17	2.48	.43
5,053	57.78	7	.08	2	.02	119.36	1.36	230	39.63					7.13	1.23
2,225	25.44	151	1.70	1	.01	107.62	1.23	132	22.74	14	2.41			9.84	1.70
324	3.70	1	.01			9.33	.11	43	7.41					1.66	.29
2	.02					.03	.00								
338	3.86			1	.01	8.44	.10	36	6.20					1.23	.21
63,387	610.43	1,129	12.70	220	2.47	1,856.64	21.23	3,533	608.72	83	14.30	26	4.48	136.10	23.45
11,784	134.74	130	1.46	184	2.07	391.42	4.48	738	127.15	9	1.55	6	1.03	29.06	5.01
65,171	745.17	1,259	14.16	404	4.54	2,248.05	25.70	4,271	735.87	92	15.85	32	5.51	165.17	28.46

TABLE No. 70 $\frac{1}{2}$.—Admissions to sick report, discharges, deaths, and noneffectiveness, with officers and total American troops,

Serial Nos.	International classification.	Mean strength.....	Officers, United States.									
			S. G. O., 3,064—A. G. O., 3,492.									
			Admis- sions.		Discharges.		Deaths.		Noneffective.			
			Number.	Ratio.	Num- ber.		Ratio.	Num- ber.		Ratio.	Number.	Ratio.
				(1)	(2)			(1)	(2)			
1	1	Typhoid fever.....	1	0.33							0.30	0.10
2	1a	Paratyphoid fever.....	1	.33							.10	.08
7-11	4	Malaria.....	22	7.18							1.23	.40
7		Etiyo-autumnal fever.....	1	.33							.23	.07
8		Malarial cachexia.....	2	.65							.25	.08
9		Quartan malarial fever.....										
10		Tertian malarial fever.....	16	5.22							.69	.22
11		Undetermined malarial fever.....	3	.98							.06	.02
12	5	Smallpox and varioloid.....										
13	5b	Vaccinia.....										
14	6	Measles.....	1	.33							.02	.01
15	7	Scarlet fever.....	2	.65							.11	.04
17	9	Diphtheria.....	4	1.31							.13	.04
18	10	Influenza.....	239	78.00							3.09	1.01
20	13	Cholera nostras.....										
21-23	14	Dysentery.....	17	5.55							1.68	.55
21		Bacillary.....										
22		Entamoebic.....	15	4.90							1.59	.52
23		Unclassified.....	2	.65							.09	.03
27	18	Erysipelas.....										
29	19b	Dengue.....	4	1.31							.05	.02
31	19d	German measles.....	1	.33							.03	.01
34	19g	Mumps.....	3	.98							.10	.03
37	20	Purulent infection and septicemia.....	1	.33				1	1 .29		.02	.01
42-46	25	Mycoses.....										
49-57	28-34	Tuberculosis, all.....	8	2.61							6.81	2.22
49-51	28	Tuberculosis of lungs.....	7	2.29							6.65	2.17
52	29	Miliary tuberculosis, acute.....										
53-57	30-34	Tuberculosis of other organs.....	1	.33							.17	.05
59-74	37-38	Venereal diseases, all.....	12	3.92							2.01	.66
59-64	37	Syphilis.....	5	1.63							1.46	.48
65-67	38a	Soft chancre.....	2	.65							.17	.06
68-74	38b	Gonococcus infection.....	5	1.63							.38	.12
75-79	39-45	Cancer and other malignant tumors.....	1	.33				1	1 .29		.04	.01
80	46	Benign tumors.....	1	.33							.39	.13
81-85	47-48	Rheumatism, articular, all.....	14	4.57							.96	.31
81-82	47	Acute articular rheumatism.....	11	3.59							.47	.15
83-85	48	Chronic articular rheumatism.....	3	.98							.48	.16
87-88	50	Diabetes.....	2	.65							.11	.03
89	51	Exophthalmic goitre.....									.14	.05
97-100	56	Alcoholism and results.....	18	5.87							.67	.22
101-102	57-58	Chronic occupational poisoning.....										
103-104	59	Other chronic poisoning, including drug habit.....										
107	61	Simple meningitis.....										
108	61a	Epidemic cerebrospinal meningitis.....										
109	62	Locomotor ataxia.....	1	.33							.20	.07
110-115	63	Other diseases of spinal cord.....	2	.65							.65	.21
116	64	Cerebral hemorrhage, apoplexy.....										
117-119	66	Paralysis without specified cause.....	1	.33							.30	.10
120-126	67-68	Mental alienation.....	6	1.96							.75	.25
127	69	Epilepsy.....	3	.98							.69	.22
129-133	73	Neuralgia and neuritis.....	40	13.06							2.98	.97
138-141	75a	Conjunctivitis.....	11	3.59							.30	.10
142	75b	Trachoma.....	1	.33							.12	.04
166	77	Pericarditis.....										
167	78	Acute endocarditis.....										
169-174	79	Organic heart disease.....	4	1.31				1	1 .29		.30	.10
175	80	Angina pectoris.....										
176-177 $\frac{1}{2}$	81	Diseases of the arteries, arterio- sclerosis, aneurism, etc.....	3	.98							.50	.16

* Including those occurring in the United States proper from commands on duty in Alaska or insular possessions.

ratios per 1,000 of mean strength, for the United States (continental), excluding Alaska for the year 1915.

¹ Excluding those occurring in the United States proper from commands on duty in Alaska or insular possessions.

TABLE No. 70½.—Admissions to sick report, discharges, deaths, and noneffectiveness, with officers and total American troops,

Serial Nos.	International classification.	Mean strength.....	Officers, United States.										
			S. G. O., 3,064—A. G. O., 3,492.										
			Admis- sions.		Discharges.		Deaths.		Noneffective.				
			Number.	Ratio.	Num- ber.		Ratio.	Num- ber.		Ratio.	Number.	Ratio.	
				(1)	(2)			(1)	(2)				
178-179	82	Embolism and thrombosis.....											
181	83b	Hemorrhoids.....	18	5.87								1.37	0.45
183	83d	Varicose veins.....	3	.98								.18	.06
184	83e	Varicocele.....	1	.33								.03	.01
185-187	84	Diseases of the lymphatic system.....	3	.98								.11	.03
193-199	86	Diseases of the nasal fossæ.....	102	33.29								1.44	.47
200-202	87	Diseases of the larynx.....	15	4.90								.19	.06
203-204	88	Diseases of the thyroid body.....											
205-206	89-90	Bronchitis.....	134	43.73								2.10	.69
207	91	Broncho-pneumonia.....	4	1.31								.45	.15
208	92	Pneumonia.....	4	1.31				1	10.20			.30	.10
209-215	93	Pleurisy.....	6	1.96								.38	.12
216-217	94	Pulmonary congestion and pul- monary apoplexy.											
219	96	Asthma.....	4	1.31								.09	.03
220	97	Pulmonary emphysema.....											
221	98a	Hæmoptysis.....											
222	98b	Hay fever.....											
224-227	99a	Diseases of the teeth and gums...	20	6.53								.46	.15
228-231	99b	Other diseases of the mouth and annexa.	2	.65								.04	.01
232-236	100	Diseases of the pharynx.....	103	33.61								1.62	.53
238	102	Ulcer of stomach.....	5	1.63				1	1.20			1.18	.38
239-244	103	Other diseases of stomach (cancer excepted).	38	12.40								.53	.17
245-253	105	Diarrhea and enteritis.....	110	35.90								2.76	.90
254	106	Ankylostomiasis.....											
255-259	107	Intestinal parasites.....	1	.33								.01	.00
260	108	Appendicitis.....	30	9.79								2.10	.69
261-263	109	Hernia.....	11	3.59								1.27	.41
264-267	110a	Diseases of the anus and fecal fistula.	4	1.31								.25	.08
268-272	110b	Other diseases of the intestines..	51	16.64								1.10	.36
275	113	Cirrhosis of liver.....	1	.33								.20	.07
276	114	Biliary calculi.....	1	.33								.21	.07
277-281	115	Other diseases of liver and gall bladder.	11	3.59								.93	.30
283-284	117	Simple peritonitis.....											
288	119	Acute nephritis.....	3	.98								.20	.06
289-291	120	Bright's disease.....	13	4.24								2.52	.82
293-299	122	Other diseases of the kidney and annexa.	5	1.63								.56	.18
303-306	124	Diseases of the bladder.....	4	1.31								.18	.06
304	124b	Enuresis.....											
307-309	125	Diseases of the urethra, urinary abscess, etc.											
310-312	126	Diseases of the prostate.....	2	.65								.54	.18
313-319	127	Diseases of the male genital organs (nonvenereal).....	8	2.61								.15	.05
322-323	143	Furuncle and carbuncle.....	18	5.88								.30	.09
324-325	144	Acute abscess and cellulitis.....	14	4.57								.42	.14
352-357	146	Diseases of the bones.....	8	2.61								1.14	.37
358-360	147	Diseases of the joints.....	11	3.59								.97	.32
367	149g	Flat foot.....	3	.98								.17	.06
372	150	Congenital malformations.....	3	.98								.07	.02
373-374	154	Senility.....											
375	189Aa	Febricula, simple continued, and other fevers of undetermined causation.....	1	.33								.01	.00
379	189Ba	Under observation, undiagnosed and unknown.....	9	2.94				1	1.20			2.44	.80
380	189Bb	Malingering.....											

¹ Including those occurring in the United States proper from commands on duty in Alaska or insular possessions.

ratios per 1,000 of mean strength, for the United States (continental), excluding Alaska for the year 1915—Continued.

¹ Excluding those occurring in the United States proper from commands on duty in Alaska or insular possessions.

TABLE No. 70½.—Admissions to sick report, discharges, deaths, and noneffectiveness, with officers and total American troops,

Serial Nos.	International classification.	Officers, United States.									
		Mean strength.....	S. G. O., 3,064—A. G. O., 3,492.								
		Causes of admission to sick report.	Admis- sions.		Discharges.		Deaths.		Noneffective.		
			Number.	Ratio.	Num- ber.		Num- ber.		Number.	Ratio.	
					(1)	(2)	(1)	(2)			
AFFECTIONS PRODUCED BY EX- TERNAL CAUSES. ²											
426-434	155-163	Suicides, all.....					1	1	0.29		
435	164	Poisoning by food.....	5	1.63							
436	165a	Venomous bites and stings.....									
437	165b	Other poisoning(deleterious gases excepted), accidental.....									
439	167	Burns (conflagrations excepted)...	5	1.63							
440	168	Absorption of deleterious gases...									
441	168a	Suffocation, strangulation.....									
442	169	Drowning, accidental.....									
443	170	Traumatism by firearms (other than specified).....	3	.98							
444	170a	Shot by sentry or guard.....									
445	171	Traumatism by cutting or piero- ing instruments.....	9	2.94							
446	172	Traumatism by fall.....	77	25.13							
448	174	Traumatism by machines.....	1	.33							
449	175	Traumatism by other crushing...	10	3.26			3	3	.86		
450	176	Injuries by animals.....	34	11.10							
452	178	Effects of excessive cold.....									
453	179	Effects of heat.....	5	1.63							
455	181	Effects of electricity.....									
456-458	182-184	Homicides, all.....									
460	186	Other external violence.....	75	24.48							
462-466		Killed or wounded in action.....	2	.65							
462		By bullet.....	2	.65							
DISEASES AND INJURIES GROUPED.											
		General diseases.....	364	118.80			2	2	.57	18.76	6.12
	1-19	Epidemic diseases.....	306	99.87						7.39	2.41
	20-59	Other general diseases.....	58	18.93			2	2	.57	11.37	3.71
		Diseases of the nervous system and organs of special sense.....	143	46.67						12.78	4.16
	60-74	Of the nervous system.....	96	31.33						10.00	3.26
	75	Of the eye and its annexa....	36	11.75						1.55	.50
	76	Of the ear and its annexa....	11	3.59						1.24	.40
	77-85	Diseases of the circulatory system	34	11.10			1	1	.29	2.76	.90
	86-98	Diseases of the respiratory system	270	88.12			1	1	.29	4.95	1.61
	99-118	Diseases of the digestive system.	390	127.28			3	3	.86	12.66	4.12
	119-127	Diseases of the genito-urinary system.....	50	16.32						4.78	1.56
	142-145	Diseases of the skin and cellular tissue.....	58	18.93						1.42	.46
	146-149	Diseases of the organs of locomo- tion.....	68	22.19						5.49	1.79
	150	Malformations, etc.....	3	.98						.07	.02
	154	Diseases, results of old age.....									
	189	Ill-defined diseases.....	12	3.92			1	1	.29	2.47	.80
		Total for disease.....	1,392	454.31			8	8	2.29	66.14	21.53
	155-186	External causes.....	233	76.04			4	4	1.15	14.80	4.83
		Total for disease and ex- ternal causes.....	1,625	530.35			12	12	3.44	80.94	26.42

¹ Including those occurring in the United States proper from commands on duty in Alaska or insular possessions.

² Excluding those occurring in the United States proper from commands on duty in Alaska or insular possessions.

ratios per 1,000 of mean strength, for the United States (continental), excluding Alaska for the year 1915—Continued.

Enlisted men, United States.										Total, United States.									
S. G. O., 63,725—A. G. O., 64,636.										S. G. O., 66,789—A. G. O., 68,128.									
Admis- sions.		Discharges.			Deaths.			Non- effective.		Admis- sions.		Discharges.			Deaths.			Non- effective.	
Number.	Ratio.	Num- ber.		Ratio.	Num- ber.		Ratio.	Number.	Ratio.	Number.	Ratio.	Num- ber.		Ratio.	Num- ber.		Ratio.	Number.	Ratio.
		(1)	(2)		(1)	(2)						(1)	(2)		(1)	(2)			
11	0.17				38	38	0.60			11	0.16				39	39	0.58		
83	1.30				1	1	.02			88	1.32				1	1	.01		
53	.83									53	.79								
32	.50				5	5	.08			32	.48				5	5	.07		
258	4.05	3	3	0.05						263	3.94	3	3	0.05					
2	.03				2	2	.03			2	.03				2	2	.03		
3	.05				25	25	.39			3	.04				25	25	.37		
217	3.40	27	24	.37	12	12	.19			220	3.29	27	24	.37	12	12	.18		
4	.06				2	2	.03			4	.06				2	2	.03		
583	9.15	6	3	.05	1	1	.02			592	8.86	6	3	.05	1	1	.01		
2,554	40.07	26	22	.34	7	7	.11			2,631	39.39	26	22	.34	7	7	.10		
63	.99	2	2	.03						64	.96	2	2	.03					
364	5.71	24	15	.23	22	22	.34			374	5.60	24	15	.23	25	25	.37		
1,018	15.97	9	9	.14	4	4	.06			1052	15.75	9	9	.14	4	4	.06		
6	.09									6	.09								
56	.88									61	.91								
1	.02									1	.01								
5	.06				17	17	.27			5	.07				17	17	.25		
3,466	54.38	14	11	.17	9	9	.14			3,541	53.02	14	11	.17	9	9	.13		
18	.28	1	1	.02	11	11	.17			20	.30	1	1	.02	11	11	.16		
18	.28	1	1	.02	11	11	.17			20	.30	1	1	.02	11	11	.16		
12,464	195.59	336	228	3.53	84	72	1.11	601.79	9.44	12,828	192.06	336	228	3.53	86	74	1.09	620.46	9.29
5,516	86.56	14	13	.20	28	28	.43	135.77	2.13	5,822	87.17	14	13	.20	28	28	.41	143.16	2.14
6,948	109.03	322	215	3.33	56	44	.68	465.93	7.31	7,006	104.90	322	215	3.33	58	46	.68	477.30	7.15
1,727	27.10	482	286	4.42	20	18	.28	143.59	2.26	1,870	27.99	482	286	4.42	20	18	.26	156.37	2.33
828	12.99	439	253	3.91	20	18	.28	107.18	1.68	924	13.83	439	253	3.91	20	18	.26	117.18	1.75
574	9.01	24	20	.31				22.66	.36	619	9.13	24	20	.31				34.20	.36
325	5.10	19	13	.20				13.75	.22	336	5.03	19	13	.20				14.98	.22
1,114	17.48	63	37	.57	27	27	.42	59.44	.98	1,148	17.19	63	37	.57	28	28	.41	62.21	.93
4,034	63.30	38	20	.31	36	36	.56	97.46	1.53	4,304	64.44	38	20	.31	37	37	.54	102.41	1.53
10,517	165.03	54	38	.59	25	24	.37	215.74	3.39	10,907	163.39	54	36	.56	28	27	.40	228.41	3.42
602	9.45	53	44	.68	12	12	.19	34.36	.54	652	9.76	53	44	.68	12	12	.18	39.14	.59
3,428	53.79	7	6	.09	2	2	.03	82.47	1.29	3,486	52.20	7	6	.09	2	2	.03	83.88	1.26
1,641	25.75	165	111	1.72	1	1	.02	81.96	1.29	1,709	25.59	165	111	1.72	1	1	.01	87.44	1.31
226	3.55	1	1	.02				6.64	.10	229	3.43	1	1	.02				6.70	.10
2	.03							.03	.00	2	.03							.03	.00
217	3.40				1	1	.02	6.39	.10	229	3.43				2	2	.03	8.86	.13
85,972	564.49	1,199	771	11.93	208	193	2.99	1,329.77	20.87	37,364	559.43	1,199	771	11.93	216	201	2.95	1,395.91	20.90
8,891	139.52	139	108	1.67	156	156	2.41	310.44	4.87	9,124	136.61	139	108	1.67	160	160	2.35	325.24	4.87
44,863	704.01	1,338	879	13.60	364	349	5.40	1,640.21	25.74	46,488	696.04	1,338	879	13.60	376	361	5.30	1,721.15	25.77

* Noneffectiveness for individual external causes not tabulated.

TABLE NO. 71.—Admissions to sick report, discharges, deaths, and noneffectiveness, with continental, excluding

29	190	Dengue.....	91	.83							.78	.91
31	195	German measles.....	46	.72							1.41	.90
34	196	Mumps.....	511	8.02							22.86	.36
37	20	Purulent infection and septicaemia.....	4	.06				4	4	.06	.15	.90
42-46	25	Mycoses.....	1	.02							.00	.00
49-57	28-34	Tuberculosis, all.....	171	2.68	170	106	1.67	30	18	.29	148.69	2.25
49-51	28	Tuberculosis of lungs.....	157	2.46	160	103	1.59	23	13	.20	144.34	2.27
52	29	Miliary tuberculosis, acute.....	1	.02				3	1	.02	.27	.91
53-57	30-34	Tuberculosis of other organs.....	13	.21	10	5	.09	4	4	.07	4.62	.07
59-74	37-38	Veneral diseases, all.....	5,328	83.00	77	57	.89	4	4	.06	254.42	1.99
59-64	37	Syphilis.....	1,099	17.24	46	35	.64	2	2	.02	78.03	1.29
65-67	38a	Soft chancre.....	1,007	15.80	2	2	.03				45.78	.72
68-74	38b	Gonococcus infection.....	3,222	56.64	29	20	.31				120.59	2.08
75-79	39-45	Cancer and other malignant tumors.....	17	.27	5	5	.08				4.21	.67
80	46	Benign tumors.....	91	1.43							2.38	.94
81-85	47-48	Rheumatism, articular, all.....	424	6.65	19	17	.26				20.35	.47
81-82	47	Acute articular rheumatism.....	254	5.65	5	4	.06				21.79	.34
83-85	48	Chronic articular rheumatism.....	70	1.10	14	13	.20				3.57	.13
87-88	50	Diabetes.....	13	.20	2	1	.02				1.55	.09
89	51	Exophthalmic goitre.....	16	.25	10	8	.12				4.75	.67
97-100	56	Alcoholism and results.....	333	13.97	24	13	.20				13.38	.21
101-102	57-58	Chronic occupational poisoning.....	4	.06							.44	.01
103-104	59	Other chronic poisoning, including drug habit.....	25	.39	9	2	.03				2.27	.04
107	61	Simple meningitis.....	2	.03	2	2	.03				1.05	.02
108	61a	Epidemic cerebrospinal meningitis.....	23	.36	7	5	.09				3.12	.06
109	62	Locomotor ataxia.....	9	.14	3	2	.03				2.45	.04
110-115	63	Other diseases of spinal cord.....	4	.06	5	3	.05				1.54	.02
116	64	Cerebral hemorrhage, apoplexy.....	7	.11							.16	.00
117-119	66	Paralysis without specified cause.....	13	.20	4	4	.06				1.85	.09
120-126	67-68	Mental alienation.....	194	3.04	304	164	2.54				60.33	.96
127	69	Epilepsy.....	74	1.16	65	39	.60				10.33	.16
129-133	73	Neuralgia and neuritis.....	355	5.57	23	16	.25				17.67	.28
138-141	75a	Conjunctivitis.....	251	3.94	2	2	.03				5.28	.08
142	75b	Trachoma.....	6	.09	1						.53	.01
166	77	Pericarditis.....	4	.06							.19	.00
167	78	Acute endocarditis.....	5	.08	2	1	.02				.60	.01
169-174	79	Organic heart disease.....	67	1.05	47	29	.44	1			11.28	.18
175	80	Angina pectoris.....	9	.14	1	1	.02				.27	.00
176-177j	81	Diseases of the arteries, atheroma, aneurism, etc.....	11	.17	2	1	.02				2.45	.04
178-179	82	Embolism and thrombosis.....	2	.03	2	1	.02				.24	.00

¹ Including those occurring in the United States proper from commands on duty in Alaska or Insular possessions.

ratios per 1,000 of mean strength, for enlisted American troops serving in the United States, Alaska, for the year 1915.

* Excluding those occurring in the United States proper from commands on duty in Alaska or insular possessions.

TABLE No. 71.—Admissions to sick report, discharges, deaths, and noneffectiveness, with continental, excluding

Serial Nos.	International classification.	Causes of admission to sick report.	United States, total enlisted men, white and colored.									
			S. G. O., 63,725—A. G. O., 64,634.									
			Admissions.									
			Number.	Ratio.								
181	83b	Hemorrhoids.....	376	5.90								
182	83d	Varicose veins.....	38	.60								
184	83e	Varicocele.....	162	2.54								
185-187	84	Diseases of the lymphatic system..	361	5.69								
193-199	86	Diseases of the nasal fossae.....	1,015	15.93								
200-202	87	Diseases of the larynx.....	193	3.03								
203-204	88	Diseases of the thyroid body.....	8	.13								
205-206	89-90	Bronchitis.....	2,353	36.92	5	2	.08	1	1	0.02	39.79	.62
207	91	Broncho-pneumonia.....	44	.69	1	1	.02	5	5	.08	3.57	.05
208	92	Pneumonia.....	175	2.75				27	27	.42	12.84	.20
209-215	93	Pleurisy.....	173	2.71	7	7	.11	3	3	.05	14.63	.23
216-217	94	Pulmonary congestion and pulmonary apoplexy.....	1	.02							.01	.00
219	96	Asthma.....	51	.80	14	6	.09				4.17	.07
220	97	Pulmonary emphysema.....	2	.03							.02	.00
221	98a	Hemoptysis.....	3	.05							.44	.01
222	98b	Hay fever.....	1	.02							.01	.00
224-227	99a	Diseases of the teeth and gums.....	238	3.77	1	1	.02				8.21	.10
228-231	99b	Other diseases of the mouth and annexa.....	61	.96							1.50	.02
232-236	100	Diseases of the pharynx.....	4,613	72.39	1	1	.02	1	1	.02	84.05	1.01
238	102	Ulcer of the stomach.....	14	.22	5	2	.03	1	1	.02	3.17	.05
239-244	103	Other diseases of stomach (cancer excepted).....	830	13.02	7	6	.09	1	1	.02	14.98	.24
245-253	105	Diarrhea and enteritis.....	2,054	32.23	1			4	3	.05	26.29	.41
254	106	Ankylostomiasis.....	20	.31	1	1	.02				1.72	.03
255-259	107	Intestinal parasites.....	84	1.03							.98	.02
260	108	Appendicitis.....	476	7.47	4	1	.02	10	10	.15	34.42	.54
261-263	109	Hernia.....	246	3.89	19	17	.26	2	2	.03	25.54	.40
264-267	110a	Diseases of the anus and fecal fistula.....	58	.91							3.69	.06
268-272	110b	Other diseases of the intestines.....	1,408	23.00	6	2	.03				19.57	.31
275	113	Cirrhosis of liver.....	5	.08	1	1	.02	1	1	.02	.66	.01
276	114	Biliary calculi.....	4	.06	1	1	.02				.49	.01
277-281	115	Other diseases of liver and gall bladder.....	246	3.89	2	2	.03	1	1	.02	10.95	.17
283-284	117	Simple peritonitis.....	1	.02				1	1	.02	.07	.00
288	119	Acute nephritis.....	17	.27				3	3	.05	1.28	.02
289-291	120	Bright's disease.....	25	.39	12	10	.15	8	8	.12	7.48	.12
292-299	122	Other diseases of the kidney and annexa.....	18	.28	1	1	.02				1.94	.03
303-306	124	Diseases of the bladder.....	126	1.99	23	27	.42				8.23	.13
304	124b	Enuresis.....	74	1.16	23	27	.42				6.32	.10
307-309	125	Diseases of the urethra, urinary abscess, etc.....	75	1.18	1	1	.02				2.49	.04
310-312	126	Diseases of the prostate.....	9	.14	1						1.08	.02
313-319	127	Diseases of the male genital organs (nonvenereal).....	284	4.46	1	1	.02				8.57	.13
323-323	143	Furuncle and carbuncle.....	1,126	17.66							19.31	.30
324-325	144	Acute abscess and cellulitis.....	811	12.72	1	1	.02	2	2	.03	20.72	.33
352-357	146	Diseases of the bones.....	131	2.06	6	4	.06	1	1	.02	9.30	.15
358-360	147	Diseases of the joints.....	260	4.08	22	20	.31				22.24	.35
367	149g	Flat foot.....	143	2.24	118	77	1.19				21.29	.33
372	150	Congenital malformations.....	226	3.55	1	1	.02				6.64	.10
373-374	154	Senility.....	2	.03							.03	.00
375	189Aa	Febricula, simple continued, and other fevers of undetermined causation.....	109	1.71							3.13	.05
379	189Ba	Under observation, undiagnosed and unknown.....	62	.97				1	1	.02	3.22	.05
380	189Bb	Malingering.....	21	.33							.72	.01

¹ Including those occurring in the United States proper from commands on duty in Alaska or other possessions.

ratios per 1,000 of mean strength, for enlisted American troops serving in the United States Alaska, for the year 1915—Continued.

United States, white, enlisted men.								United States, colored, enlisted men.							
S. G. O., 61,286—A. G. O., 62,197.								S. G. O., 2,439—A. G. O., 2,439.							
Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.	
Number.	Ratio.	Number.		Ratio.	Number.		Ratio.	Number.	Ratio.	Number.		Ratio.	Number.		Ratio.
		(1)	(2)		(1)	(2)				(1)	(2)		(1)	(2)	
340	5.55						9.74	0.16	36	14.76				0.92	0.38
38	.62	2	2	0.03			2.12	.03							
160	2.61	2	1	.02			8.66	.14	2	.82				.04	.02
356	5.81	2					18.95	.31	5	2.05				.35	.14
985	16.07	1					16.01	.26	30	12.30	1	1	0.41	.38	.15
183	2.99	1					3.26	.05	10	4.10				.29	.12
8	.13	7	3	.05			1.85	.03							
2,272	37.07	5	2	.03	1	1	38.14	.62	81	33.21				1.57	.64
43	.70	1	1	.02	4	4	3.29	.05	1	.41		1	1	0.41	.08
164	2.68				25	25	11.48	.19	11	4.51		2	2	.82	1.35
161	2.63	7	7	.11	3	3	14.29	.23	12	4.92				.32	.13
1	.02						.01	.00							
50	.82	12	6	.10			3.99	.07	1	.41	2			.18	.07
2	.03						.08	.00							
5	.08						.44	.01							
1	.02						.01	.00							
317	5.17	1	1	.02			5.93	.10	19	7.79				.28	.11
59	.96						1.42	.02	2	.82				.08	.03
4,534	73.98	1	1	.02	1	1	6.25	1.02	79	32.39				1.52	.62
13	.21	5	2	.03	1	1	3.15	.05	1	.41				.02	.01
789	12.87	7	6	.10			14.40	.24	41	16.81		1	1	.41	.58
1,968	32.12	1			4	3	25.23	.41	86	35.26				.99	.41
19	.31	1	1	.02			1.70	.03	1	.41				.01	.00
63	1.03						.95	.02	1	.41				.01	.00
471	7.69	4	1	.02	10	10	33.32	.54	5	2.05				1.10	.45
247	4.03	18	16	.26	2	2	25.18	.41	1	.41	1	1	.41	.36	.15
53	.86						3.43	.06	5	2.05				.25	.10
1,410	23.01	5	2	.03			18.40	.30	56	22.96	1			1.18	.48
5	.08	1	1	.02	1	1	.66	.01							
4	.07	1	1	.02			.48	.01							
234	3.82	2	2	.03	1	1	10.15	.17	12	4.92				.78	.32
1	.02				1	1	.07	.00							
16	.26				3	3	1.19	.02	1	.41				.09	.04
33	.54	12	10	.16	8	8	7.18	.12	2	.82				.30	.12
17	.28	1	1	.02			1.90	.03	1	.41				.04	.02
125	2.04	33	27	.43			8.22	.13	1	.41				.01	.00
73	1.19	33	27	.43			.62	.10	1	.41				.00	.00
72	1.17	1	1	.02			2.36	.04	3	1.23				.13	.06
9	.15	1					1.08	.02							
276	4.50	1	1	.02			8.22	.13	8	3.28				.35	.14
1,111	18.13						19.05	.31	15	6.15				.22	.09
799	13.04	1	1	.02	2	2	20.35	.34	12	4.92				.37	.15
131	2.14	5	4	.06	1	1	9.04	.15			1			.26	.11
256	4.18	21	20	.32			21.51	.35	4	1.64				.73	.30
141	2.30	107	71	1.14			1.86	.30	2	.82	11	6	2.46	2.56	1.05
208	3.39	1	1	.02			6.23	.10	18	7.38				.41	.17
2	.03						.08	.00							
94	1.53						1.85	.03	15	6.15				.28	.11
62	1.01				1	1	2.89	.05						.35	.14
21	.34						.73	.01							

* Excluding those occurring in the United States proper from commands on duty in Alaska or insular possessions.

TABLE No. 71.—Admissions to sick report, discharges, deaths, and noneffectiveness, with continental, excluding

Serial Nos.	International classification.	United States, total enlisted men, white and colored.									
		Mean strength.....	S. G. O., 63,725—A. G. O., 64,636.								
		Causes of admission to sick report.	Admissions.		Discharges.		Deaths.		Noneffective.		
			Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	
				(1)	(2)			(1)	(2)		
AFFECTIONS PRODUCED BY EXTERNAL CAUSES. ²											
426-434	155-163	Suicides, all.....	11	0.17				38	38	0.59	
435	164	Poisoning by food.....	83	1.30				1	1	.02	
436	165a	Venomous bites and stings.....	53	.83							
437	165b	Other poisoning (deleterious gases excepted).....	32	.50				5	5	.08	
439	167	Burns (conflagrations excepted)...	258	4.05	3	3	0.05				
440	168	Absorption of deleterious gases....	2	.03							
441	168a	Suffocation, strangulation.....	3	.05				2	2	.03	
442	169	Drowning, accidental.....						25	25	.39	
443	170	Traumatism by firearms (other than specified).....	217	3.40	27	24	.37	12	12	.19	
444	170a	Shot by sentry or guard.....	4	.06				2	2	.03	
445	171	Traumatism by cutting or piercing instruments.....	583	9.15	6	3	.05	1	1	.02	
446	172	Traumatism by fall.....	2,554	40.07	26	22	.34	7	7	.11	
448	174	Traumatism by machines.....	63	.99	2	2	.03				
449	175	Traumatism by other crushing...	364	5.71	24	15	.23	22	22	.34	
450	176	Injuries by animals.....	1,018	15.97	9	9	.14	4	4	.06	
452	178	Effects of excessive cold.....	6	.09							
453	179	Effects of heat.....	56	.88							
455	181	Effects of electricity.....	1	.02							
456-458	182-4	Homicides, all.....	5	.08				17	17	.27	
460	186	Other external violence.....	3,466	54.38	14	11	.17	9	9	.14	
462-466		Killed or wounded in action.....	18	.28	1	1	.02	11	11	.17	
462		By bullet.....	18	.28	1	1	.02	11	11	.17	
DISEASES AND INJURIES GROUPED.											
		General diseases.....	12,464	195.59	336	228	3.53	84	72	1.11	601.70
	1-19	Epidemic diseases.....	5,516	86.56	14	13	.20	28	28	.43	135.77
	20-59	Other general diseases.....	6,948	109.03	322	215	3.33	56	44	.68	465.93
		Diseases of the nervous system and organs of special sense.....	1,727	27.10	482	286	4.42	20	18	.28	143.59
	60-74	Of the nervous system.....	828	12.99	439	253	3.91	20	18	.28	107.18
	75	Of the eye and its annexa....	574	9.01	24	20	.31				22.66
	76	Of the ear and its annexa....	325	5.10	19	13	.20				13.75
	77-85	Diseases of the circulatory system.	1,114	17.48	63	37	.57	27	27	.42	59.44
	86-98	Diseases of the respiratory system.	4,034	63.30	38	20	.31	36	36	.56	97.46
	99-118	Diseases of the digestive system...	10,517	165.03	54	38	.59	25	24	.37	15.74
	119-127	Diseases of the genito-urinary system.....	602	9.45	53	44	.68	12	12	.19	34.76
	142-145	Diseases of the skin and cellular tissue.....	3,428	53.79	7	6	.09	2	2	.03	82.47
	146-149	Diseases of the organs of locomotion.....	1,641	25.75	165	111	1.72	1	1	.02	81.95
	150	Malformations, etc.....	226	3.55	1	1	.02				6.64
	154	Diseases, results of old age.....	2	.03							.03
	189	Ill-defined diseases.....	217	3.40				1	1	.02	6.39
		Total for disease.....	35,972	564.49	1,199	771	11.93	208	193	2.99	1,329.77
	155-186	External causes.....	8,891	139.52	139	108	1.67	156	156	2.41	310.44
		Total for disease and external causes.....	44,863	704.01	1,338	879	13.60	364	349	5.40	1,640.21

¹ Including those occurring in the United States proper from commands on duty in Alaska or insular possessions.

² Excluding those occurring in the United States proper from commands on duty in Alaska or insular possessions.

ratios per 1,000 of mean strength, for enlisted American troops serving in the United States, Alaska, for the year 1915—Continued.

United States, white, enlisted men.										United States, colored, enlisted men.									
S. G. O., 61,286—A. G. O., 62,197.										S. G. O., 2,439—A. G. O., 2,439.									
Admissions.		Discharges.		Deaths.		Noneffective.				Admissions.		Discharges.		Deaths.		Noneffective.			
Number.	Ratio.	Number.		Ratio.	Number.		Ratio.	Number.	Ratio.	Number.	Ratio.	Number.		Ratio.	Number.		Ratio.	Number.	Ratio.
		(1)	(2)		(1)	(2)						(1)	(2)						
11	.19				38	38	.61												
80	1.31				1	1	.02			3	1.23								
53	.86																		
30	.49				5	5	.08			2	.82								
253	4.13	3	3	.05						5	2.05								
2	.03				2	2	.03												
3	.05				25	25	.40												
207	3.38	25	22	.35	11	11	.18			10	4.10	2	2	.82	1	1	.41		
3	.05				2	2	.03			1	.41								
559	9.12	5	2	.03	1	1	.02			24	9.84	1	1	.41					
2,435	39.73	24	20	.32						119	48.79	2	2	.82					
60	.98	2	2	.03						3	1.23								
357	5.83	23	14	.23	22	22	.35			7	2.87	1	1	.41					
941	15.35	8	8	.13	4	4	.06			77	31.57	1	1	.41					
6	.10																		
54	.88									2	.82								
1	.02																		
3	.05				16	16	.26			2	.82				1	1	.41		
3,363	54.96	14	11	.18	9	9	.14			98	40.18								
17	.28	1	1	.02	11	11	.18			1	.41								
17	.28	1	1	.02	11	11	.18			1	.41								
12,104	197.50	311	213	3.42	75	69	1.11	574.24	9.37	360	147.60	25	15	6.15	9	3	1.23	27.46	11.26
5,369	87.46	14	13	.21	28	28	.45	132.55	2.16	156	63.96							3.22	1.32
6,744	110.04	297	200	3.22	47	41	.66	441.70	7.21	204	83.64	25	15	6.15	9	3	1.23	24.23	9.94
1,656	27.62	447	266	4.28	19	18	.29	133.78	2.18	71	29.11	35	20	8.20	1			9.81	4.03
788	12.86	408	237	3.81	19	18	.29	99.97	1.63	40	16.40	31	16	6.56	1			7.21	2.96
545	8.89	20	16	.26				20.08	.33	29	11.89	4	4	1.64				2.58	1.06
323	5.27	19	13	.21				13.72	.22	2	.82							.02	.01
1,067	17.41	59	33	.53	24	24	.39	56.84	.93	47	19.27	4	4	1.64	3	3	1.23	2.60	1.07
3,888	63.44	35	19	.31	33	33	.53	93.31	1.52	146	59.86	3	1	.41	3	3	1.23	4.15	1.70
10,208	166.57	52	37	.59	24	23	.37	208.58	3.40	309	126.69	2	1	.41	1	1	.41	7.16	2.94
586	9.56	53	44	.71	12	12	.19	33.43	.55	16	6.56							.93	.38
3,366	54.93	7	6	.10	2	2	.03	79.68	1.30	62	25.42							2.79	1.14
1,600	26.11	151	105	1.69	1	1	.02	77.56	1.27	41	16.81	14	6	2.46				4.40	1.80
208	3.39	1	1	.02				6.23	.10	18	7.38							.41	.17
2	.03							.03	.00										
202	3.30				1	1	.02	5.77	.09	15	6.15							.62	.26
34,887	569.25	1,116	724	11.64	191	183	2.94	1,269.43	20.71	1,085	444.85	83	47	19.27	17	10	4.10	60.34	24.74
8,535	139.27	130	99	1.59	154	154	2.48	204.54	4.81	356	145.95	9	9	3.69	2	2	.82	15.90	6.52
43,422	708.51	1,246	823	13.23	345	337	5.42	1,563.92	25.52	1,441	590.81	92	56	22.94	19	12	4.92	76.24	31.26

* Noneffectiveness for individual external causes not tabulated.

TABLE No. 71½.—Admissions to sick report, discharges, deaths, and noneffectiveness, with grand total,

Serial Nos.	International classification.	Philippine Islands, officers.								
		Mean strength.....	S. G. O., 666—A. G. O., 674.							
		Causes of admission to sick report.	Admis- sions.		Dis- charges.		Deaths.		Non- effective.	
			Number.	Ratio.	Number.	Ratio.	Num- ber.		Number.	Ratio
							(1)	(2)		
2	1a	Paratyphoid fever.....								
5	2	Typhus fever.....								
7-11	4	Malaria.....	24	36.04					0.71	1.08
7		Estivo-autumnal fever.....	10	15.02					.32	.47
8		Malarial cachexia.....	2	3.00					.15	.22
9		Quartan malarial fever.....								
10		Tertian malarial fever.....	7	10.51					.13	.19
11		Undetermined malarial fever..	5	7.51					.12	.18
12	5	Smallpox and varioloid.....								
13	5b	Vaccinia.....								
14	6	Measles.....							.05	.08
17	9	Diphtheria.....	1	1.50					.05	.07
18	10	Influenza.....	3	4.50					.02	.03
19	12	Asiatic cholera.....								
21-23	14	Dysentery.....	5	7.51					.20	.44
21		Bacillary.....								
22		Entamoebic.....	5	7.51					.20	.44
23		Unclassified.....								
27	18	Erysipelas.....								
29	19b	Dengue.....	85	127.63					1.54	2.32
31	19d	German measles.....								
34	19g	Mumps.....	2	3.00					.06	.08
37	20	Purulent infection and septicemia.								
40-57	28-34	Tuberculosis, all.....								
40-51	28	Tuberculosis of lungs.....								
53-57	30-34	Tuberculosis of other organs...								
59-74	37-38	Venereal diseases, all.....	6	9.01					.40	.60
59-64	37	Syphilis.....	2	3.00					.26	.39
65-67	38a	Soft chancre.....								
68-74	38b	Genococcus infection.....	4	6.01					.14	.21
75-79	39-45	Cancer and other malignant tumors								
80	46	Benign tumors.....								
81-85	47-48	Rheumatism, articular, all.....	1	1.50					.22	.34
81-82	47	Acute articular rheumatism....								
83-85	48	Chronic articular rheumatism..	1	1.50					.22	.34
89	51	Exophthalmic goitre.....								
97-100	54	Alcoholism and results.....	1	1.50					.01	.01
103-104	59	Other chronic poisoning, includ- ing drug habit.....								
109	62	Locomotor ataxia.....								
110-115	63	Other diseases of spinal cord.....								
116	64	Cerebral hemorrhage, apoplexy....	1	1.50			1	1.48	.09	.14
117-119	66	Paralysis without specified cause..								
120-126	67-68	Mental alienation.....	1	1.50					.03	.05
127	69	Epilepsy.....								
129-133	73	Neuralgia and neuritis.....	3	4.50					.02	.04
138-141	75a	Conjunctivitis.....	6	9.01					.04	.05
142	75b	Trachoma.....								
166	77	Pericarditis.....								
167	78	Acute endocarditis.....								
169-174	79	Organic heart disease.....	2	3.00			1	1.48	.10	.16
175	80	Angina pectoris.....	1	1.50					.01	.01
176-177½	81	Diseases of the arteries, atheroma, aneurism, etc.....	1	1.50					.01	.02
181	83b	Hemorrhoids.....	6	9.01					.19	.29
183	83d	Varicose veins.....								
184	83e	Varicocele.....								
185-187	84	Diseases of the lymphatic system..								
193-199	86	Diseases of the nasal fosse.....	12	18.02					.08	.12
200-202	87	Diseases of the larynx.....	4	6.01					.05	.07
203-204	88	Diseases of the thyroid body.....								
205-206	89-90	Bronchitis.....	27	40.54					.52	.78

¹ Number of discharges and deaths which actually occurred.

ratio per 1,000 of mean strength, for the Philippine Islands, officers, total enlisted and year 1915.

* Number of discharges and deaths, including those of cases invalided home and deducted from the United States.

TABLE No. 71½.—Admissions to sick report, discharges, deaths, and noneffectiveness, with grand total.

Serial Nos.	International classification.	Mean strength.....	Philippine Islands, officers.								
			S. G. O., 600—A. G. O., 674.								
			Admissions.		Discharges.				Non-effective.		
			Causes of admission to sick report.		Number.		Ratio.		Number.		Ratio.
			Number.	Ratio.	Number.	Ratio.	(1)	(2)	Ratio.	Number.	Ratio.
207	91	Broncho-pneumonia.....	1	1.50						.04	.06
208	92	Pneumonia.....									
209-215	93	Pleurisy.....									
216-217	94	Pulmonary congestion and pulmonary apoplexy.....									
219	96	Asthma.....									
220	97	Pulmonary emphysema.....	1	1.50						.16	.29
221	98a	Hæmoptysis.....									
224-227	99a	Diseases of the teeth and gums.....	6	7.51						.05	.08
228-231	99b	Other diseases of the mouth and annexa.....	1	1.50						.01	.02
232-236	100	Diseases of the pharynx.....	19	28.53						.22	.34
238	102	Ulcer of stomach.....	2	3.00						.24	.35
239-244	103	Other diseases of stomach (cancer excepted).....	11	16.52						.15	.22
245-253	106	Diarrhea and enteritis.....	34	51.05						.51	.77
254	106	Ankylostomiasis.....									
255-259	107	Intestinal parasites.....	1	1.50						.00	.00
260	108	Appendicitis.....	18	27.03						1.50	2.26
261-263	109	Hernia.....	1	1.50						.26	.39
264-267	110a	Diseases of the anus and fecal fistula.....	5	7.51						.36	.53
268-272	110b	Other diseases of the intestines.....	23	34.53						.55	.82
274	114	Biliary calculi.....	2	3.00						.02	.03
277-281	115	Other diseases of liver and gall bladder.....	6	9.01						.28	.42
288	119	Acute nephritis.....	2	3.00						.04	.06
289-291	120	Bright's disease.....	1	1.50						.01	.01
292-299	122	Other diseases of the kidney and annexa.....	2	3.00						.06	.09
303-306	124	Diseases of the bladder.....	2	3.00						.06	.12
304	124b	Enuresis.....									
307-309	125	Diseases of the urethra, urinary abscess, etc.....	4	6.01						.17	.26
310-312	126	Diseases of the prostate.....									
313-319	127	Diseases of the male genital organs (nonvenereal).....									
322-323	143	Furuncle and carbuncle.....	15	22.52						.26	.39
324-325	144	Acute abscess and cellulitis.....	12	18.02						.24	.42
326-327	146	Diseases of the bones.....	3	4.50						.15	.22
328-360	147	Diseases of the joints.....	5	7.50						.36	.55
367	149g	Flat foot.....									
372	150	Congenital malformations.....	1	1.50						.02	.04
375	150Aa	Febricula, simple continued, and other fevers of undetermined causation.....	7	10.51						.10	.15
379	150Ba	Under observation, undiagnosed and unknown.....	2	3.00						.06	.07
380	150Bb	Malingering.....									
AFFECTIONS PRODUCED BY EXTERNAL CAUSES. ¹											
426-434	155-162	Suicides, all.....									
435	164	Poisoning by food.....	6	9.01							
436	165a	Venomous bites and stings.....	2	3.00							
437	165b	Other poisoning (deleterious gases excepted).....									
438	166	Conflagration.....									
439	167	Burns (conflagrations excepted).....	2	3.00							
441	168a	Suffocation, strangulation.....									

¹ Number of discharges and deaths which actually occurred.² Number of discharges and deaths, including those of cases invalided home and deducted from the United States.

ratios per 1,000 of mean strength, for the Philippine Islands, officers, total enlisted and year 1915—Continued.

Philippine Islands, total enlisted (including Philippine Scouts).										Philippine Islands, total officers and enlisted men (including scouts).									
S. G. O., 17,339—A. G. O., 17,394.										S. G. O., 18,005—A. G. O., 18,068.									
Admis- sions.		Dis- charges.		Deaths.		Non- effective.				Admis- sions.		Dis- charges.		Deaths.		Non- effective.			
Number.	Ratio.	Num- ber.		Ratio.	Num- ber.		Ratio.	Number.	Ratio.	Number.	Ratio.	Num- ber.		Ratio.	Num- ber.		Ratio.	Number.	Ratio.
		(1)	(2)		(1)	(2)						(1)	(2)						
11	.63							.72	.04	12	.67							.76	.04
37	2.13				1	1	.06	2.89	.17	37	2.05				1	1	.06	2.89	.16
56	3.24							2.76	.16	56	3.11							2.76	.15
1	.06							.03	.00	1	.06							.03	.00
18	1.04	1	5	.29				.90	.05	18	1.00	1	5	.29				.90	.05
2	.12							.03	.00	1	.06							.16	.01
77	4.44							1.55	.09	2	.11							.03	.00
20	1.15							.48	.03	82	4.55							1.60	.09
711	41.01							10.16	.59	21	1.17							.49	.03
2	.12	2	.11					.28	.02	730	40.54							10.38	.58
155	8.93									4	.22	2	.11					.52	.03
656	37.83							2.89	.17	166	9.22	1	.06	1	1	.06		3.04	.17
69	3.98	1	.06	1	1	.06		8.49	.49	600	38.32							9.00	.50
46	2.65							1.68	.10	69	3.83	1	.06	1	1	.06		1.68	.09
144	8.30							.98	.06	47	2.61							.98	.05
34	1.96							11.43	.66	162	9.00	1	.06	1	1	.06		12.94	.72
12	.09							3.61	.21	35	1.94	2	.11					3.87	.21
1,084	62.52	2	.11					.48	.03	17	.94							.84	.05
3	.17							12.81	.74	1,107	61.48	2	.11					13.36	.74
80	4.61							.28	.02	5	.28							.20	.02
9	.52							4.35	.25	86	4.78							4.62	.26
12	.69				1	1	.06	.30	.02	11	.61				1	1	.06	.33	.02
4	.23				2	2	.11	.82	.05	13	.72	1	.06	2	2	.11		.83	.05
32	1.85	4	.23					.53	.03	6	.33							.59	.03
14	.81	4	.23					1.85	.11	34	1.89	4	.23					1.94	.11
20	1.67							.89	.05	14	.78	4	.23					.89	.05
5	.29	1	.06					.45	.03	33	1.83							.62	.03
60	3.46							.25	.01	5	.28	1	.06					.25	.01
203	17.47							1.58	.09	60	3.33							1.58	.09
455	26.24							5.85	.34	318	17.66							6.11	.34
81	4.67	1	.06					12.12	.70	467	26.93							12.40	.69
61	3.52	1	.06					2.59	.15	84	4.67	1	.06	2	.11			2.74	.15
64	3.69							4.93	.28	66	3.67	1	.06	3	.17			5.20	.29
70	4.04	27	1.55					3.92	.23	64	3.55	27	1.55					3.92	.23
83	4.79	1	.06					2.64	.15	71	3.94	1	.06					2.66	.15
11	.63									90	5.00								
7	.40							1.62	.09	13	.72							1.72	.10
								.78	.04	7	.39							.83	.05
								.16	.01									16	.01
1	.06									1	.06								
138	7.96				7	7	.40			144	8.00				7	7	.39		
15	.87									17	.94								
13	.75																		
2	.12									13	.72								
56	3.23									2	.11								
1	.06				1	1	.06			58	3.22				1	1	.06		
										1	.06								

* Noneffectiveness for external individual causes not tabulated.

TABLE No. 71½.—Admissions to sick report, discharges, deaths, and noneffectiveness, with grand total,

Serial Nos.	International classification.	Philippine Islands, officers.								
		Mean strength.....	S. G. O., 666—A. G. O., 674.							
		Causes of admission to sick report.	Admis- sions.		Dis- charges.		Deaths.		Non- effective.	
			Number.	Ratio.	Number.	Ratio.	Num- ber.		Ratio.	Number.	Ratio.
						(1)	(2)			
		AFFECTIONS PRODUCED BY EXTER- NAL CAUSES—continued.								
442	169	Drowning, accidental.....								
443	170	Traumatism by firearms (other than specified).....	1	1.50						
445	171	Traumatism by cutting or piero- ing instruments.....	1	1.50						
446	172	Traumatism by fall.....	25	37.54						
448	174	Traumatism by machines.....								
449	175	Traumatism by other crushing....	6	9.01						
450	176	Injuries by animals.....								
453	179	Effects of heat.....								
456-458	182-4	Homicides, all.....								
459	185	Fractures, causes not specified....								
460	186	Other external violence.....	26	39.04						
462-466		Killed or wounded in action.....								
462		By bullet.....								
		DISEASES AND INJURIES GROUPED.								
		General diseases.....	129	193.70					3.36	5.04
	1-19	Epidemic diseases.....	121	181.68					2.73	4.10
	20-59	Other general diseases.....	8	12.01					.63	.96
		Diseases of the nervous system and organs of special sense.....	28	42.05			1	11.48	.90	1.35
	60-74	Of the nervous system.....	12	18.02			1	11.48	.68	1.03
	75	Of the eye and its annexa.....	11	16.52					.12	.18
	76	Of the ear and its annexa.....	5	7.51					.10	.14
	77-85	Diseases of the circulatory system.	10	15.02			1	11.48	.32	.48
	86-98	Diseases of the respiratory system.	45	67.57					.84	1.26
	99-118	Diseases of the digestive system...	128	192.19					4.15	6.26
	119-127	Diseases of the genito-urinary sys- tem.....	12	18.02					.37	.55
	142-145	Diseases of the skin and cellular tissue.....	39	58.56					.81	1.21
	146-149	Diseases of the organs of locomo- tion.....	20	30.03					.64	.97
	150	Malformations, etc.....	1	1.50					.02	.04
	189	Ill-defined diseases.....	9	13.51					.15	.23
		Total for disease.....	421	632.13			2	22.97	11.56	17.38
	155-186	External causes.....	69	103.60					2.15	3.23
		Total for disease and external causes.....	490	735.74			2	22.97	13.72	20.60

¹ Number of discharges and deaths which actually occurred.

ratios per 1,000 of mean strength, for the Philippine Islands, officers, total enlisted and year 1915—Continued.

Philippine Islands, total enlisted (including Philippine Scouts).										Philippine Islands, total officers and enlisted men (including scouts).									
S. G. O., 17,339—A. G. O., 17,394.										S. G. O., 18,005—A. G. O., 18,068.									
Admis-sions.		Dis-charges.			Deaths.			Non-effective.		Admis-sions.		Dis-charges.			Deaths.			Non-effective.	
Number.	Ratio.	Num-ber.		Ratio.	Num-ber.		Ratio.	Number.	Ratio.	Number.	Ratio.	Num-ber.		Ratio.	Num-ber.		Ratio.	Number.	Ratio.
		(1)	(2)		(1)	(2)						(1)	(2)		(1)	(2)			
					3	3	.17								3	3	.17		
22	1.27	1	2	.11	1	1	.06			23	1.28	1	2	.11	1	1	.06		
184	10.61		1	.06	1	1	.06			185	10.27		1	.06	1	1	.06		
463	26.76	2	5	.29	1	1	.06			488	27.10	2	5	.29	1	1	.06		
3	.17									3	.17								
119	6.86		2	.11	3	3	.17			125	6.94		2	.11	3	3	.17		
63	3.63									63	3.50								
55	3.17									55	3.05								
3	.17				4	4	.23			3	.17				4	4	.23		
3	.17									3	.17								
746	43.03		1	.06						772	42.88		1	.06					
1	.06	2	2	.11						1	.06	2	2	.11					
1	.06	2	2	.11						1	.06	2	2	.11					
6,058	349.39	28	95	5.46	10	16	.92	193.56	11.16	6,187	343.63	28	95	5.46	10	16	.89	196.92	10.94
3,261	188.07	2	3	.17	5	5	.29	69.23	3.99	3,382	187.84	2	3	.17	5	5	.28	71.96	4.00
2,797	161.32	26	92	5.29	5	11	.63	124.34	7.17	2,805	155.79	26	92	5.29	5	11	.61	124.97	6.94
712	41.06	21	151	8.68	2	2	.11	25.03	1.44	740	41.09	21	151	8.68	3	3	.17	25.93	1.44
238	13.72	19	144	8.27	2	2	.11	14.65	.84	250	13.88	19	144	8.28	3	3	.17	15.33	.84
284	16.38	2	3	.17				5.79	.33	295	16.38	2	3	.17				5.91	.33
190	10.96		4	.23				4.59	.26	195	10.83		4	.23				4.68	.26
297	17.13	2	12	.69	2	2	.11	13.15	.76	307	17.05	2	12	.69	3	3	.17	13.46	.75
837	48.27	3	9	.52	1	1	.06	21.82	1.26	882	48.99	3	9	.52	1	1	.06	22.67	1.26
3,094	178.44	1	9	.52	3	3	.17	59.46	3.43	3,222	178.94	1	9	.52	3	3	.17	63.62	3.53
155	8.94		6	.34	3	3	.17	5.91	.34	167	9.28		6	.34	3	3	.17	6.27	.35
1,248	71.98	1	1	.06				33.99	1.96	1,287	71.48	1	1	.06				34.79	1.93
288	22.38	2	36	2.07				15.94	.92	408	22.66	2	36	2.07				16.59	.92
70	4.04	1	1	.06				2.64	.15	71	3.94	1	1	.06				2.66	.15
106	6.11							2.59	.15	115	6.39							2.75	.15
12,965	747.74	59	320	18.40	21	27	1.55	374.10	21.57	13,386	743.46	59	320	18.40	23	29	1.61	385.67	21.42
1,915	110.44	5	19	1.09	21	21	1.21	57.18	3.30	1,984	110.19	5	19	1.09	21	21	1.16	59.33	3.30
14,880	858.18	64	339	19.49	42	48	2.77	431.28	24.87	15,370	853.65	64	339	19.49	44	50	2.77	444.99	24.72

² Number of discharges and deaths, including those of cases invalided home and deducted from the United States.

TABLE No. 72.—Admissions to sick report, discharges, deaths, and noneffectiveness, with white and colored,

Serial Nos.	International classification.	Philippine Islands, total American, enlisted men, white and colored.									
		Mean strength.....	S. G. O., 11,834—A. G. O., 11,889.								
			Causes of admission to sick report.	Admis- sions.		Discharges.		Deaths.		Noneffective.	
				Number.	Ratio.	Num- ber.		Num- ber.		Number.	Ratio.
				(1)	(2)	Ratio.	(1)	(2)	Ratio.		
2	1a	Paratyphoid fever.....	1	0.08						0.09	0.01
7-11	4	Malaria.....	747	63.12						12.47	1.14
7		Estivo-autumnal fever.....	131	11.07						2.80	.24
8		Malarial cachexia.....	3	.25						.16	.01
9		Quartan malarial fever.....	4	.34						.08	.00
10		Tertian malarial fever.....	592	50.01						10.10	.85
11		Undetermined malarial fever.....	17	1.44						.35	.00
12	5	Smallpox and varioloid.....								.07	.01
14	6	Measles.....	23	1.94						1.82	.15
17	9	Diphtheria.....	1	.08			1	1	0.08	.02	.00
18	10	Influenza.....	38	3.21						.74	.06
21-23	14	Dysentery.....	63	5.32	1	0.08	2	2	.17	2.63	.21
21		Bacillary.....	2	.17						.13	.01
22		Entamoebic.....	58	4.90	1	.08	2	2	.17	2.41	.20
23		Unclassified.....	3	.25						.10	.01
27	18	Erysipelas.....	1	.08						.01	.00
29	19b	Dengue.....	1,554	131.31						22.99	1.94
34	19g	Mumps.....	154	13.01						9.85	.83
37	20	Purulent infection and septicemia.....	3	.25			3	3	.25	.05	.00
49-57	28-34	Tuberculosis, all.....	76	6.42	39	3.28	6	6	.50	5.93	.50
49-51	28	Tuberculosis of lungs.....	74	6.25	38	3.20	6	6	.50	5.61	.47
53-57	30-34	Tuberculosis of other organs.....	2	.16	1	.08				.33	.03
59-74	37-38	Veneral diseases, all.....	2,205	186.32	11	.93	1	1	.08	95.88	8.19
59-64	37	Syphilis.....	482	40.73	6	.50	1	1	.08	22.40	1.89
65-67	38a	Soft chancre.....	450	38.02						13.84	1.17
68-74	38b	Gonococcus infection.....	1,273	107.57	5	.42				59.64	5.00
75-79	39-45	Cancer and other malignant tumors.....	2	.17						.39	.00
80	46	Benign tumors.....	11	.93						.59	.05
81-85	47-48	Rheumatism, articular, all.....	39	3.29	1	.08				2.95	.25
81-82	47	Acute articular rheumatism.....	30	2.53	1	.08				1.78	.15
83-85	48	Chronic articular rheumatism.....	9	.76						1.16	.10
89	51	Exophthalmic goitre.....	4	.34	1	.08				.33	.03
97-100	56	Alcoholism and results.....	214	18.08	6	.50				2.50	.21
103-104	59	Other chronic poisoning, including drug habit.....	5	.42	6	.50				.26	.02
109	62	Locomotor ataxia.....	3	.25	1	.08				.21	.02
110-115	63	Other diseases of spinal cord.....	3	.25	1	.08	1	1	.08	.15	.01
117-119	66	Paralysis without specified cause.....	1	.08						.06	.00
120-126	67-68	Mental alienation.....	86	7.27	95	7.99				6.65	.56
127	69	Epilepsy.....	18	1.52	16	1.35				1.38	.12
129-133	73	Neuralgia and neuritis.....	45	3.80	4	.34				1.51	.13
133-141	75a	Conjunctivitis.....	69	5.83						1.18	.10
142	75b	Trachoma.....	2	.17						.08	.01
166	77	Pericarditis.....								.02	.00
167	78	Acute endocarditis.....	2	.17	1	.08				.02	.00
169-174	79	Organic heart disease.....	16	1.35	8	.67				1.24	.10
175	80	Angina pectoris.....	1	.08						.00	.00
176-177	81	Diseases of the arteries, atheroma, aneurism, etc.....	2	.17	1	.08	1	1	.08	.19	.02
181	83b	Hemorrhoids.....	65	5.49						1.93	.16
183	83d	Varicose veins.....	7	.59						.56	.05
184	83a	Varicocele.....	46	3.89						2.10	.18
185-187	84	Diseases of the lymphatic system.....	119	10.05						5.10	.43
193-199	86	Diseases of the nasal fossae.....	93	7.86						1.36	.12
200-202	87	Diseases of the larynx.....	17	1.44						.38	.03
203-204	88	Diseases of the thyroid body.....	2	.17						.21	.02
205-206	89-90	Bronchitis.....	417	35.24	1	.08				9.24	.79
207	91	Broncho-pneumonia.....	2	.17						.30	.03
208	92	Pneumonia.....	26	2.20						1.98	.17
209-215	93	Pleurisy.....	44	3.72						2.12	.18
219	96	Asthma.....	11	.93	4	.34				.49	.04

1 Number of discharges and deaths which actually occurred.

ratios per 1,000 of mean strength, for Philippine Islands, American troops, enlisted men, year 1915.

Philippine Islands, white American, enlisted men.								Philippine Islands, colored American, enlisted men.							
S. G. O., 10,493—A. G. O., 10,548.								S. G. O., 1,341—A. G. O., 1,341.							
Admissions.		Discharges.			Deaths.			Noneffective.		A					
Number.	Ratio.	Number.		Ratio.	Number.		Ratio.	Number.	Ratio.			Number.	Ratio.		
		(1)	(2)		(1)	(2)									
718	58.43							12.88	1.23	1	0.75			0.00	0.07
130	12.30							2.78	.26	1	.75			.59	.44
3	.29							.16	.02					.04	.03
4	.38							.06	.01						
564	53.75							9.55	.91	28	20.88			.55	.41
17	1.62							.35	.03					.00	.00
								.07	.01						
23	2.19							1.82	.17						
1	.10				1	10.00		.02	.00						
28	2.67							.58	.06	10	7.46			.16	.12
61	5.81	1	0.00		2	2.19		3.41	.32	2	1.49			.22	.17
2	.19							.13	.01						
56	5.34	1	.00		2	2.19		3.18	.30	2	1.49			.22	.17
2	.29							.10	.01						
1	.10							.01	.00						
1,156	110.17							17.64	1.68	308	294.80			5.35	3.90
130	12.30							3.05	.77	24	17.90			1.80	1.34
3	.29				3	3.28		.05	.01						
62	5.91	36	3.41		2	2.19		4.88	.47	14	10.44	3	2.24	42.98	1.05 .79
61	5.81	35	3.32		2	2.19		4.65	.44	13	9.69	3	2.24	42.98	.95 .72
1	.10		.09					.23	.02	1	.75			.09	.07
1,858	177.08	9	.85					82.27	7.84	347	258.78	2	1.49	1	1.75 13.61 10.15
308	37.93	5	.47					18.48	1.76	84	62.64	1	.75	1	1.75 3.03 2.93
407	38.79							12.13	1.16	43	32.08			1.70	1.27
1,063	100.35	4	.38					61.66	4.92	220	164.05	1	.75	7.99	5.96
1	.10							.14	.01	1	.75			.25	.19
11	1.05							.69	.06						
38	3.62	1	.09					2.85	.27	1	.75			.09	.07
29	2.76	1	.09					1.09	.16	1	.75			.09	.07
9	.86							1.16	.11						
4	.38	1	.09					.33	.03						
197	18.77	6	.57					2.31	.22	17	12.68			.19	.14
4	.38	5	.47					.24	.02	1	.75	1	.75	.02	.02
3	.29	1	.09					.21	.02						
3	.29	1	.09	1	1.00			.15	.01						
1	.10							.06	.01						
77	7.34	86	8.16					6.05	.58	9	6.71	9	6.71	.60	.45
17	1.62	15	1.42					1.32	.13	1	.75	1	1.75	.07	.05
43	4.00	4	.38					1.42	.13	8	2.24			.10	.07
62	5.91							1.11	.11	7	5.22			.07	.05
1	.10							.01	.00	1	.75			.06	.05
								.02	.00						
2	.19	1	.09					.02	.00						
14	1.33	8	.75					1.04	.10	2	1.49			.19	.15
1	.10							.00	.00						
1	.10	1	.09					.18	.02	1	.75			.01	.00
66	6.24							1.63	.16	10	7.46			.30	.22
7	.67							.56	.05						
41	3.91							1.85	.18	5	4.11			.25	.18
99	9.43							4.22	.40	20	14.91			.87	.66
75	7.15							1.08	.10	18	13.42			.28	.21
15	1.43							.34	.03	2	1.49			.03	.02
2	.19							.21	.02						
351	33.46	1	.09					8.03	.77	66	49.22			1.21	.90
2	.19							.30	.03						
19	1.81							1.37	.13	7	5.22			.60	.45
42	4.00							2.04	.19	2	1.49			.08	.06
10	.95	3	.28					.48	.04	1	.75	1	.75	.03	.02

* Number of discharges and deaths, including those of cases invalided home and deducted from the United States.

TABLE No. 72.—Admissions to sick report, discharges, deaths, and noneffectiveness, with white and colored,

Serial Nos.	International classification.		Philippine Islands, total American, enlisted men, white and colored.							
		Mean strength.....	S. G. O., 11,834—A. G. O., 11,889.							
		Causes of admission to sick report.	Admissions.		Discharges.		Deaths.		Noneffective.	
			Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
			(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
221	98a	Hæmoptysis.....	2	.17					.03	.00
224-227	99a	Diseases of the teeth and gums...	56	4.73					1.21	.10
228-231	99b	Other diseases of the mouth and annexa.....	15	1.27					.36	.03
232-236	100	Diseases of the pharynx.....	672	56.78					9.58	.81
238	102	Ulcer of stomach.....	2	.17	2	.17			.28	.02
239-244	103	Other diseases of stomach (cancer excepted).....	134	11.32	1	.08	1	1 .08	2.69	.23
245-253	105	Diarrhea and enteritis.....	44	37.94					6.02	.51
254	106	Ankylostomiasis.....	17	1.44					.63	.05
255-259	107	Intestinal parasites.....	13	1.10					.29	.02
260	108	Appendicitis.....	140	11.83	1	.08			11.28	.95
261-263	109	Hernia.....	30	2.53	2	.17			3.15	.27
264-267	110a	Diseases of the anus and fecal fistula.....	7	.59					.34	.03
268-272	110b	Other diseases of the intestines...	752	63.54	2	.17			9.38	.79
276	114	Biliary calculi.....	2	.17					.26	.02
277-281	115	Other diseases of liver and gall bladder.....	77	6.51					3.36	.30
288	119	Acute nephritis.....	8	.68			1	1 .08	.26	.02
289-291	120	Bright's disease.....	9	.76	1	.08	1	1 .08	.64	.05
293-299	122	Other diseases of the kidney and annexa.....	4	.34					.53	.04
303-306	124	Diseases of the bladder.....	32	2.70	4	.34			1.85	.16
304	124b	Enuresis.....	14	1.18	4	.34			.89	.08
307-309	125	Diseases of the urethra, urinary abscess, etc.....	29	2.45					.45	.04
310-312	126	Diseases of the prostate.....	5	.42	1	.08			.25	.02
313-319	127	Diseases of the male genital organs (nonvenereal).....	40	3.38					1.17	.10
322-323	143	Furuncle and carbuncle.....	187	15.81					3.23	.27
324-325	144	Acute abscess and cellulitis.....	254	21.46					6.18	.55
352-357	146	Diseases of the bones.....	66	5.58	1	.08			1.89	.16
358-360	147	Diseases of the joints.....	49	4.14	2	.17			4.37	.37
367	147g	Flat foot.....	64	5.41	27	2.27			3.92	.33
372	150	Congenital malformations.....	65	5.49					2.47	.21
375	189Aa	Febricula, simple continued, and other fevers of undetermined causation.....	51	4.32					.94	.08
379	189Ba	Under observation, undiagnosed and unknown.....	8	.68					.50	.04
380	189Bb	Malingering.....	7	.59					.16	.01
AFFECTIONS PRODUCED BY EXTERNAL CAUSES. ¹										
426-434	155-163	Suicides, all.....	1	.08			6	6 .51		
435	164	Poisoning by food.....	136	11.49						
436	165a	Venomous bites and stings.....	12	1.01						
437	165b	Other poisoning (deleterious gases excepted).....	12	1.01						
439	167	Burns (conflagrations excepted).....	43	3.63			1	1 .08		
442	169	Drowning, accidental.....					3	3 .25		
443	170	Traumatism by firearms (other than specified).....	15	1.27	1	.08				
445	171	Traumatism by cutting or piercing instruments.....	122	10.31	1	.08				
446	172	Traumatism by fall.....	330	27.88	3	.25	1	1 .08		
448	174	Traumatism by machines.....	3	.25						
449	175	Traumatism by other crushing...	101	8.53	2	.17	3	3 .25		
450	176	Injuries by animals.....	60	5.07						

¹ Number of discharges and deaths which actually occurred.² Number of discharges and deaths, including those of cases invalided home and deducted from the United States.

ratios per 1,000 of mean strength, for Philippine Islands, American troops, enlisted men, year 1915—Continued.

Philippine Islands, white American, enlisted men.										Philippine Islands, colored American, enlisted men.									
S. G. O., 10,493—A. G. O., 10,548.										S. G. O., 1,341—A. G. O., 1,341.									
Admissions.		Discharges.			Deaths.			Noneffective.		Admissions.		Discharges.			Deaths.			Non-effective.	
Number.	Ratio.	Num-ber.		Ratio.	Num-ber.		Ratio.	Number.	Ratio.	Number.	Ratio.	Num-ber.		Ratio.	Num-ber.		Ratio.	Number.	Ratio.
		(1)	(2)		(1)	(2)						(1)	(2)		(1)	(2)			
2	.19							.03	.00										
52	4.96							1.16	.11	4	2.98							.05	.04
12	1.14							.30	.03	3	2.24							.07	.05
604	57.56							8.62	.82	68	50.71							.95	.71
2	.19	2	.19					.28	.03										
118	11.25		1	.09	1	1	.09	2.22	.21	16	11.93							.47	.35
411	39.17							5.68	.54	38	28.34							.34	.25
17	1.62							.63	.06										
12	1.14							.27	.03	1	.75							.02	.02
113	10.77		1	.09				9.06	.86	27	20.13							2.22	1.66
25	2.38		2	.19				2.48	.24	5	3.73							.67	.50
6	.57							.27	.03	1	.75							.07	.06
589	56.13		1	.09				7.77	.74	163	121.55		1	.75				1.61	1.20
2	.19							.26	.02										
73	6.96							3.04	.29	4	2.98							.32	.24
7	.67							.25	.02	1	.75				1	1	.75	.01	.01
9	.86		1	.09	1	1	.09	.64	.06										
3	.29							.47	.05	1	.75							.05	.04
30	2.86		4	.38				1.82	.17	2	1.49							.04	.03
14	1.33		4	.38				.89	.09										
25	2.38							.38	.04	4	2.98							.07	.05
4	.38		1	.09				.25	.02	1	.75							.00	.00
35	3.34							1.02	.10	5	3.73							.16	.12
162	15.44							2.78	.26	25	18.64							.44	.33
222	21.15							5.18	.50	32	23.86							.99	.74
50	4.77		1	.09				1.44	.14	16	11.93							.45	.34
46	4.38							3.85	.37	3	2.24		2	1.49				.52	.39
48	4.57		22	2.09				2.74	.26	16	11.93		5	3.73				1.18	.88
47	4.48							1.49	.14	18	13.42							.97	.73
49	4.67							.85	.08	2	1.49							.09	.07
6	.57							.41	.04	2	1.49							.08	.06
3	.29							.09	.01	4	2.98							.07	.05
1	.10				6	6	.57												
135	12.87									1	.75								
11	1.05									1	.75								
12	1.14																		
41	3.91				1	1	.09			2	1.49								
					3	3	.28												
14	1.33		1	.09						1	.75								
100	9.53		1	.09						22	16.40								
277	26.40		3	.28	1	1	.09			53	39.52								
3	.29																		
100	9.53		2	.19	2	2	.19			1	.75				1	1	.75		
58	5.53									2	1.49								

* Noneffectiveness for individual external cases not tabulated.

TABLE NO. 72.—Admissions to sick report, discharges, deaths, and noneffectiveness, with white and colored,

Serial Nos.	International classification.		Philippine Islands, total American, enlisted men, white and colored.											
		Mean strength.....	S. G. O., 11,834—A. G O., 11,889.											
		Causes of admission to sick report.	Admis- -ions.		Discharges.		Deaths.		Noneffective					
			Number.	Ratio.	Num- ber		Num- ber.		Number.	Ratio.				
			(1)	(2)	Ratio.	(1)	(2)	Ratio.						
453 456-458 460	179 182-4 186	AFFECTIONS PRODUCED BY EX- TERNAL CAUSES—continued.												
		Effects of heat.....	40	3.38										
		Homicides, all.....	1	.08			2	2	.17					
		Other external violence.....	511	43.18		1	.08							
		DISEASES AND INJURIES GROUPED.												
		General diseases.....	5,167	436.62		67	5.64	7	13	1.09	162.34	13.72		
		1-19 Epidemic diseases.....	2,604	220.04		1	.08	3	3	.25	53.05	4.48		
		20-59 Other general diseases.....	2,563	216.58		66	5.55	4	10	.84	109.29	9.24		
		Diseases of the nervous system and organs of special sense.....	557	47.06		130	10.93	1	1	.08	20.18	1.70		
		60-74 Of the nervous system.....	210	17.74		125	10.51	1	1	.08	12.55	1.06		
		75 Of the eye and its annexa.....	180	15.21		1	.08				3.55	.30		
		76 Of the ear and its annexa.....	167	14.11		4	.34				4.07	.34		
		77-85 Diseases of the circulatory sys- tem.....	271	22.90	1	11	.93	1	1	.08	11.50	.97		
		86-98 Diseases of the respiratory sys- tem.....	615	51.97		6	.50				16.17	1.37		
		99-118 Diseases of the digestive system..	2,367	200.02		8	.67	1	1	.08	48.87	4.13		
		119-127 Diseases of the genito-urinary system.....	131	11.07		6	.50	2	2	.17	5.20	.45		
		142-145 Diseases of the skin and cellular tissue.....	744	62.87							18.30	1.55		
		146-149 Diseases of the organs of locomo- tion.....	320	27.04		34	2.86				14.08	1.19		
		150 Malformations, etc.....	65	5.49							2.47	.21		
		189 Ill-defined diseases.....	71	6.00							1.63	.14		
		155-186	Total for disease.....	10,308	871.05		1,262	22.04	12	18	1.51	300.82	25.42	
				External causes.....	1,413	119.40		14	1.18	16	16	1.35	44.13	3.73
				Total for disease and ex- ternal causes.....	11,721	990.45		1,276	23.22	28	34	2.86	344.96	29.15

1 Number of discharges and deaths which actually occurred.

ratios per 1,000 of mean strength, for Philippine Islands, American troops, enlisted men, year 1915—Continued.

Philippine Islands, white American, enlisted men.										Philippine Islands, colored American, enlisted men.									
S. G. O., 10,493—A. G. O., 10,548.										S. G. O., 1,341—A. G. O., 1,341.									
Admissions.		Discharges.			Deaths.			Noneffective.		Admissions.		Discharges.			Deaths.			Non-effective.	
Number.	Ratio.	Number.		Ratio.	Number.		Ratio.	Number.	Ratio.	Number.	Ratio.	Number.		Ratio.	Number.		Ratio.	Number.	Ratio.
		(1)	(2)		(1)	(2)						(1)	(2)		(1)	(2)			
39	3.72									1	.75								
1	.10				2	2	.18												
445	42.41		1	.09						66	49.22								
4,318	411.51	61	5.78	6	8	.76	138.86	13.24	849	633.11	6	4.47	1	53.73	23.48	17.51			
2,136	203.56	1	.09	3	3	.28	44.80	4.27	468	348.99					8.25	6.15			
2,182	207.95	60	5.69	3	5	.47	94.06	8.96	381	284.11	6	4.47	1	53.73	15.22	11.35			
513	48.89	120	11.37	1	1	.09	18.74	1.79	44	32.80	10	7.46			1.44	1.08			
195	18.58	115	10.90	1	1	.09	11.70	1.11	15	11.18	10	7.46			.85	.64			
164	15.63	1	.09				3.21	.31	16	11.93					.35	.26			
154	14.68	4	.38				8.83	.37	13	9.69					.24	.18			
230	21.92	1	11	1.04			9.85	.94	41	30.57			1	1	.75	1.64	1.23		
519	49.46	5	.47				13.93	1.32	96	71.59	1	.75			2.24	1.67			
2,037	194.12	7	.66	1	1	.09	42.06	4.01	330	246.09	1	.75			6.80	5.07			
117	11.15	6	.57	1	1	.09	4.97	.47	14	10.44			1	1	.75	.32	.24		
651	62.04						15.96	1.52	93	69.35					2.34	1.75			
259	24.68	27	2.56				11.01	1.05	61	45.49	7	5.22			3.07	2.29			
47	4.48						1.49	.14	18	13.42					.97	.73			
63	6.00						1.89	.13	8	5.97					.24	.18			
8,754	834.27	1237	22.47	9	11	1.04	258.28	24.62	1,554	1,158.84	25	18.64	3	75.22	42.54	31.73			
1,260	120.08	14	1.33	15	15	1.42	37.64	3.59	153	114.09			1	1	.75	6.50	4.86		
10,014	954.35	1251	23.79	24	26	2.46	295.92	28.20	1,707	1,272.93	25	18.64	4	85.97	49.04	36.57			

* Number of discharges and deaths, including those of cases invalided home and deducted from the United States.

TABLE No. 73.—Admissions to sick report, discharges, deaths, and noneffectiveness, with Canal Zone, and

Serial Nos.	International classification.	Causes of admission to sick report.	Alaska, officers and enlisted men.							
			Mean strength.....							
			787							
			Admissions.		Discharges.		Deaths.		Noneffective.	
			Number.	Ratio.	Num-ber.		Num-ber.		Number.	Ratio.
					(1)	(2)	(1)	(2)		
7-11	4	Malaria.....	1	1.27					0.01	0.01
7		Estivo-autumnal fever.....	1	1.27					.01	.01
9		Quartan malarial fever.....								
10		Tertian malarial fever.....								
11		Undetermined malarial fever.....								
13	5b	Vaccinia.....								
14	6	Measles.....								
18	10	Influenza.....	7	8.89					.10	.13
21-23	14	Dysentery.....	1	1.27					.01	.03
21		Bacillary.....								
22		Entamoebic.....	1	1.27					.01	.02
27	18	Erysipelas.....								
29	19b	Dengue.....								
31	19d	German measles.....								
34	19g	Mumps.....								
49-57	28-34	Tuberculosis, all.....	1	1.27					.12	.15
49-51	28	Tuberculosis of lungs.....	1	1.27					.12	.15
52	29	Miliary tuberculosis, acute.....								
53-57	30-34	Tuberculosis of other organs.....								
59-74	37-38	Venereal diseases, all.....	27	34.31					.41	.53
59-64	37	Syphilis.....	3	3.81					.12	.16
65-67	38a	Soft chancre.....	6	7.62					.02	.03
68-74	38b	Gonococcus infection.....	18	22.87					.27	.34
75-79	39-45	Cancer and other malignant tumors.....	1	1.27					.01	.01
80	46	Benign tumors.....	1	1.27					.02	.03
81-85	47-48	Rheumatism, articular, all.....	4	5.08					.05	.08
81-82	47	Acute articular rheumatism.....	3	3.81					.04	.06
83-85	48	Chronic articular rheumatism.....	1	1.27					.01	.01
87-88	50	Diabetes.....								
89	51	Exophthalmic goitre.....	1	1.27						
97-100	56	Alcoholism and results.....	8	10.17		1	1.31		.06	.08
103-104	59	Chronic poisoning, including drug habit.....	1	1.27					.01	.01
107	61	Simple meningitis.....								
108	61a	Epidemic cerebrospinal meningitis.....								
110-115	63	Other diseases of spinal cord.....								
117-119	66	Paralysis without specified cause.....								
120-126	67-68	Mental alienation.....	8	10.17		3	3.93	1	.23	.27
127	69	Epilepsy.....								
129-133	73	Neuralgia and neuritis.....	5	6.35		1	1.31		.16	.21
138-141	75a	Conjunctivitis.....								
142	75b	Trachoma.....								
166	77	Pericarditis.....								
167	78	Acute endocarditis.....								
176-177	81	Diseases of the arteries, atheroma, aneurism, etc.....								
178-179	82	Embolism and thrombosis.....								
181	83b	Hemorrhoids.....								
183	83d	Varicose veins.....								
184	83e	Varicocele.....								
185-187	84	Diseases of the lymphatic system.....								
193-199	86	Diseases of the nasal fossæ.....	5	6.35					.09	.11
200-202	87	Diseases of the larynx.....	6	7.62					.06	.08
203-204	88	Diseases of the thyroid body.....								
205-206	89-90	Bronchitis.....	24	30.42					.29	.37
207	91	Broncho-pneumonia.....	1	1.27					.06	.07
208	92	Pneumonia.....	1	1.27					.11	.14
209-215	93	Pleurisy.....	4	5.08					.22	.28
219	96	Asthma.....	2	2.54					.04	.05

1 Number of discharges and deaths which actually occurred

*ratios per 1,000 of mean strength, for American troops serving in Alaska, Panama
China, year 1915.*

³ Number of discharges and deaths, including those of cases invalided home and deducted from the United States.

TABLE No. 73.—Admission to sick report, discharges, deaths, and noneffectiveness, with Canal Zone, and China,

Serial Nos.	International classification.	Causes of admission to sick report.	Alaska, officers and enlisted men.							
			Mean strength.....							
			787							
			Admissions.		Discharges.		Deaths.		Noneffective.	
			Number.	Ratio.	Num-ber.		Num-ber.		Number.	Ratio.
					(1)	(2)	(1)	(2)		
221	98a	Hæmoptysis	1	1.27					.01	.01
222	98b	Hay fever.....								
224-227	99a	Diseases of the teeth and gums..	4	5.08					.04	.05
228-231	99b	Other diseases of the mouth and annexa.....								
232-236	100	Diseases of the pharynx.....	35	44.47					.33	.41
238	102	Ulcer of stomach.....	1	1.27		1	1.31		.02	.03
239-244	103	Other diseases of stomach (cancer excepted).....	4	5.08					.08	.11
245-253	105	Diarrhea and enteritis.....	6	7.62					.03	.04
254	106	Ankylostomiasis.....								
255-259	107	Intestinal parasites.....								
260	108	Appendicitis.....	5	6.35					.30	.39
261-263	109	Hernia.....	4	5.08					.22	.28
264-267	110a	Diseases of the anus and fecal fistula.....								
268-272	110b	Other diseases of the intestines...	4	5.08					.05	.07
276	114	Biliary calculi.....								
277-281	115	Other diseases of liver and gall bladder.....	4	5.08					.09	.11
288	119	Acute nephritis.....								
289-291	120	Bright's disease.....								
293-299	122	Other diseases of the kidney and annexa.....								
303-306	124	Diseases of the bladder.....	1	1.27					.02	.03
304	124b	Enuresis.....								
307-309	125	Diseases of the urethra, urinary abscess, etc.....								
310-312	126	Diseases of the prostate.....								
313-319	127	Diseases of the male genital organs (nonvenereal).....	2	2.54					.05	.07
322-323	143	Furuncle and carbuncle.....	3	3.81					.04	.05
324-325	144	Acute abscess and cellulitis.....	3	3.81					.07	.09
352-357	146	Diseases of the bones.....								
358-360	147	Diseases of the joints.....	3	3.81					.01	.05
367	149g	Flat foot.....	2	2.54		2	2.62		.36	.46
372	150	Congenital malformations.....	4	5.08					.15	.19
375	189Aa	Febricula, simple continued, and other fevers of undetermined causation.....	1	1.27					.01	.01
379	189Ba	Under observation, undiagnosed, and unknown.....								
380	189Bb	Malingering.....								
AFFECTIONS PRODUCED BY EXTERNAL CAUSES. ¹										
426-434	155-163	Suicides, all.....					1	1.27		
435	164	Poisoning by food.....								
436	165a	Venomous bites and stings.....	2	2.54						
437	165b	Other poisoning (deleterious gases excepted).....								
439	167	Burns (conflagrations excepted).....	2	2.54						
442	169	Drowning, accidental.....								
443	170	Traumatism by firearms (other than specified).....								
444	170a	Shot by sentry or guard.....								
445	171	Traumatism by cutting or piercing instruments.....	5	6.35						
446	172	Traumatism by fall.....	16	20.33						
448	174	Traumatism by machines.....	1	1.27						
449	175	Traumatism by other crushing.....								
450	176	Injuries by animals.....								

¹ Number of discharges and deaths which actually occurred.
² Number of discharges and deaths, including those of cases invalided home and deducted from the United States.

*ratios per 1,000 of mean strength, for American troops serving in Alaska, Panama
year 1915—Continued.*

TABLE NO. 73.—Admissions to sick report, discharges, deaths, and noneffectiveness, with Canal Zone, and China,

Serial Nos.	International classification.	Alaska, officers and enlisted men.										
		Mean strength.....	787									
		Causes of admission to sick report.	Admissions.		Discharges.		Deaths.			Noneffective.		
			Number.	Ratio.	Number.		Ratio.	Number.		Ratio.	Number.	Ratio.
(1)	(2)	(1)	(2)	(1)	(2)							
		AFFECTIONS PRODUCED BY EXTERNAL CAUSES—continued.										
452	178	Effects of excessive cold.....	3	3.81								
453	179	Effects of heat.....										
455	181	Effects of electricity.....										
6-458	182-4	Homicides, all.....										
460	186	Other external violence.....	36	45.75								
		DISEASES AND INJURIES GROUPED										
		General diseases.....	53	67.34		1	1.31			0.80	1.01	
	1-19	Epidemic diseases.....	9	11.44						.13	.16	
	20-59	Other general diseases.....	44	55.91		1	1.31			.67	.85	
		Diseases of the nervous system and organs of special sense.....	22	27.95	1	6	7.86	1	1.27	.59	.76	
	60-74	Of the nervous system.....	18	22.87	1	6	7.86	1	1.27	.54	.69	
	75	Of the eye and its annexa.....	2	2.54						.03	.04	
	76	Of the ear and its annexa.....	2	2.54						.02	.03	
	77-85	Diseases of the circulatory system.....	1	1.27						.01	.02	
	86-98	Diseases of the respiratory system.....	44	55.91						.88	1.12	
	99-118	Diseases of the digestive system..	67	85.13		1	1.31			1.16	1.48	
	119-127	Diseases of the genito-urinary system.....	3	3.81						.07	.09	
	142-145	Diseases of the skin and cellular tissue.....	11	13.98						.18	.23	
	146-149	Diseases of the organs of locomotion.....	23	29.23		2	2.62			.86	1.09	
	150	Malformations, etc.....	4	5.08						.15	.19	
	189	Ill-defined diseases.....	2	2.54						.02	.02	
		Total for disease.....	230	292.24	1	9	11.80	1	1.27	4.73	6.02	
	155-186	External causes.....	68	86.40				1	1.27	2.12	2.70	
		Total for disease and external causes.....	298	378.65	1	9	11.80	1	2.54	6.86	8.71	

¹ Number of discharges and deaths which actually occurred.

ratios per 1,000 of mean strength, for American troops serving in Alaska, Panama year 1915—Continued.

Panama Canal Zone, officers and enlisted men.								China, officers and enlisted men.							
B. G. O., 5,903—A. G. O., 6,108.								1,378							
Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.	
Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
18	3.05							1	0.73						
314	53.19	2	.34					81	58.78						
1,817	307.81	1	.15	2	2.54	55.65	9.43	833	604.50	5	3.75	1	21.45	23.49	17.05
853	148.20					20.47	3.47	87	63.13					2.32	1.88
954	161.61	1	.15	2	2.54	35.18	5.90	746	541.36	5	3.75	1	21.45	21.17	15.36
265	44.89	10	2.6	4.40	1	1	1.16	57	41.36	5	3.75			2.63	1.91
97	16.43	9	2.3	3.72	1	1	1.16	30	21.77	4	3.00			1.79	1.30
92	15.59	2	.34			2.18	.37	15	10.88	1	.75			.54	.39
76	12.87	1	.2	.34		1.53	.26	12	8.71					.30	.22
165	27.95	7	1.18	1	1.16	10.59	1.79	66	40.64	1	.75			2.18	1.58
204	51.50	4	.68	2	2.33	7.82	1.27	174	126.27			1	1.73	2.92	2.12
832	140.95	5	.85	1	1.16	20.56	3.48	496	359.94			1	1.73	7.43	5.39
48	8.13			1	1.16	1.88	.32	18	12.08					.57	.42
567	96.06					13.24	2.24	97	70.39	1	.75			2.16	1.57
144	24.39	14	2.37			6.29	1.07	77	55.87					1.79	1.30
34	5.76					.73	.12	7	5.08					.19	.14
14	2.37					.21	.04	16	11.61					.42	.31
4,190	709.81	11	71.12	0	8.1.31	127.84	21.66	1,831	1,328.74	12	8.99	3	4.2.90	43.79	31.78
882	149.41	6	1.02	7	7.1.15	23.44	3.97	151	109.58	1	.75	2	2.1.45	3.68	2.67
5,072	859.22	11	77.13	13	15.2.46	151.28	25.63	1,982	1,438.32	13	9.74	5	6.4.35	47.47	34.45

* Number of discharges and deaths, including those of cases invalided home and deducted from the United States.

TABLE NO. 74.—Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for American troops, total officers and enlisted men, and separately for white and colored serving in Hawaii, year 1915.

		Hawaii, officers and enlisted men.										Hawaii, enlisted men.									
		S. G. O., 8,576—A. G. O., 9,215.										S. G. O., 8,572—A. G. O., 8,864.									
Serial No.	International classification.	Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.					
		Num-ber.	Ratio.	Num-ber.	Ratio.	Num-ber.	Ratio.	Num-ber.	Ratio.	Num-ber.	Ratio.	Num-ber.	Ratio.	Num-ber.	Ratio.						
																(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Causes of admission to sick report.																					
1	1	4	0.45					0.63	0.07	4	0.47					0.63	0.07				
2	1a	1	.11					.24	.03	1	.12					.24	.03				
7-11	4	15	1.69					.46	.05	15	1.75					.46	.05				
7																					
10																					
11		14	1.59					.45	.05	14	1.63					.45	.05				
13	5b	1	.11					.01	.00	1	.12					.01	.00				
14	6	4	.45					.02	.00	4	.47					.02	.00				
15	7	22	2.48			2	0.22	1.70	.19	22	2.57			2	0.23	1.70	.20				
17	9	2	.23					.12	.01	2	.23					.12	.01				
18	10	4	.45					.13	.01	4	.47					.13	.01				
21-23	14	171	19.27					3.34	.38	167	18.31					3.17	.37				
21		20	2.25					2.13	.24	17	1.96					2.08	.24				
22		5	.56					.22	.03	4	.47					.20	.02				
23		13	1.46					1.52	.17	11	1.28					1.50	.17				
27		2	.23					.38	.04	2	.23					.38	.04				
31		3	.34					.14	.02	3	.35					.08	.01				
34		27	2.93					1.75	.20	26	2.93					1.75	.20				
42-46	25	139	15.66					8.03	.90	139	16.22					8.03	.94				
49-57	26	1	.11					.02	.00	1	.12					.02	.00				
49-51	26-34	31	3.49			3	.33	2.39	.27	31	3.62			3	.34	2.39	.28				
53	29	28	3.15			2	.23	1.96	.22	26	2.87			2	.23	1.96	.23				
55-57	30-34	1	.11			1	.11	.10	.01	1	.12			1	.11	.10	.01				
59-74	37-39	2	.23					.35	.04	2	.23					.35	.04				
59-64		850	96.76			1	.11	42.42	4.73	848	96.04			1	.11	42.39	4.64				
59-64		237	26.70					14.31	1.60	236	27.58					14.19	1.65				

	65-67	68-74	75-79	80-84	85-89	90-94	95-99	100-104	105-109	110-114	115-119	120-124	125-129	130-134	135-139	140-144	145-149	150-154	155-159	160-164	165-169	170-174	175-179	180-184	185-189	190-194	195-199	200-204	205-209	210-214	215-219	220-224
38a																																
38b																																
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203-204																																
205-206																																
207																																
208																																
209-215																																
216																																
218																																

1 Number of discharges and deaths which actually occurred.
 2 Number of discharges and deaths, including those of cases invalided home and deducted from the United States.

113-319	127	Diseases of the male genital organs (non-venereal).	48	5.41						1.24	.14	48	5.40						1.24	.15
320-323	143	Furuncle and carbuncle.	126	14.19						2.02	.23	124	14.47						1.99	.24
324-325	144	Acute abscess and cellulitis.	96	10.82						1.54	.21	96	11.20						1.84	.31
352-357	146	Diseases of the bones.	37	3.04						2.50	.28	26	3.03						2.44	.29
358-360	147	Diseases of the joints.	26	2.93						1.80	.20	24	2.80						1.72	.20
367	149a	Flat foot.	7	.79						.20	.02	7	.82						.20	.02
372	150	Congenital malformations.	30	3.38						.79	.09	20	3.50						.79	.09
376	150Aa	Fibrocyst, simple continued, and other fe-	11	1.24						.25	.08	11	1.26						.25	.08
379	150Ba		3	.34						.08	.01	1	.12						.01	.03
380	150Bb	Malinger.	3	.34						.08	.01	3	.35						.08	.01
420-434	155-163	AFFECTIONS PRODUCED BY EXTERNAL CAUSES. ¹																		
435	164	Bulldozes, all.	1	.11								1	.12							
436	165a		98	11.04								97	11.32							
437	165b		2	.23								2	.23							
439	167		6	.68								6	.70							
441	168a		51	5.75								50	5.53							
442	169																			
443	170																			
445	171		26	2.82								25	2.92							
446	172		70	7.89								67	7.93							
448	174		234	26.36								224	26.13							
449	175	Obdurate.	4	.46								4	.47							
450	176	Traumatism by other crushing.	119	13.41								116	13.53							
		Injuries by animals.	43	4.84								41	4.78							

¹ Number of discharges and deaths which actually occurred.² Number of discharges and deaths, including those of cases invalided home and deducted from the United States.³ Non-effectiveness for individual external causes not tabulated.

TABLE No. 74.—Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for American troops, total officers and enlisted men, and separately for white and colored serving in Hawaii, year 1915—Continued.

		Hawaii, officers and enlisted men.										Hawaii, enlisted men.									
		S. G. O., 8,876—A. G. O., 9,215.										S. G. O., 8,572—A. G. O., 8,884									
Serial No.	International classification.	Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.					
		Num-ber.	Ratio.	Num-ber.	Ratio.	Num-ber.	Ratio.	Num-ber.	Ratio.	Num-ber.	Ratio.	Num-ber.	Ratio.	Num-ber.	Ratio.						
																(1)	(2)	(1)	(2)	(1)	(2)
	Mean strength.....																				
	Causes of admission to sick report.																				
	AFFECTIONS PRODUCED BY EXTERNAL CAUSES—continued.																				
453 456-458 460	179 Effects of heat.....	11	1.24							11	1.28										
	182-184 Homicides, all.....	1	.11			1	.11			1	.12			1	.11						
	186 Other external violence	442	49.79			1	.11			430	50.16			1	.11						
	DISEASES AND INJURIES GROUPED.																				
1-19 20-59	General diseases.....	1,441	162.34							1,421	165.77										
	Epidemic diseases..	417	46.98			5	.87			399	46.55			5	.90						
	Other general diseases.....	1,024	115.37			2	.22							2	.23						
60-74	Diseases of the nervous system and organs of special senses.....																				
	Of the nervous system.....					3	.65							3	.68						
	Of the eye and its annexa.....																				
75	Of the eye and its annexa.....																				
76	Of the ear and its annexa.....																				
77-86	Diseases of the circulatory system.....	230	25.92			2	.33			216	25.21			2	.34						
	Diseases of the respiratory system.....	109	12.28			3	.33			100	11.67			3	.34						
	Diseases of the respiratory system.....	81	9.13							76	8.87										
80-88	Diseases of the respiratory system.....	40	4.51							40	4.67										
	Diseases of the respiratory system.....	131	14.76			4	.43			122	14.23			4	.45						
	Diseases of the respiratory system.....	406	45.74			3	.23			382	44.56			3	.23						

99-118	Diseases of the digestive system.....	944	106.35	.....	2	.23	1	2	.22	24.07	2.71	894	104.29	.....	2	.23	1	2	.23	22.89	2.67
119-127	Diseases of the genito-urinary system.....	122	13.74	.....	3	.34	1	1	.11	6.32	.71	118	13.77	.....	3	.34	1	1	.11	6.14	.72
142-145	Diseases of the skin and cellular tissue.....	424	47.77	.....	.....	.....	.....	.....	.....	9.71	1.09	420	49.00	.....	.....	.....	.....	.....	.....	9.64	1.13
146-149	Diseases of the organs of locomotion.....	163	18.36	.....	4	.45	.....	.....	.....	7.46	.84	154	17.97	.....	4	.45	.....	.....	.....	7.24	.84
150	Malformations, etc.....	30	3.38	.....	.....	.....	.....	.....	.....	.79	.09	30	3.50	.....	.....	.....	.....	.....	.....	.79	.09
189	Ill-defined diseases.....	26	2.93	.....	.....	.....	.....	.....	.....	.56	.06	22	2.57	.....	.....	.....	.....	.....	.....	.48	.06
	Total for disease.....	3,917	441.30	.....	87	9.79	15	20	2.17	143.81	16.20	3,779	440.85	.....	87	9.79	15	20	2.25	140.52	16.39
155-186	External causes.....	1,129	127.20	.....	10	1.13	10	10	1.09	35.81	4.03	1,098	128.09	.....	10	1.13	7	7	.79	34.66	4.04
	Total for disease and external causes.....	5,046	568.50	.....	97	10.92	25	30	3.26	179.61	20.24	4,877	568.94	.....	97	10.92	22	27	3.04	175.18	20.44

1 Number of discharges and deaths which actually occurred.
2 Number of discharges and deaths, including those of cases invalidated home and deducted from the United States.

TABLE No 74.—Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for American troops, total officers and enlisted men, and separately for white and colored serving in Hawaii, year 1915—Continued.

		Hawaii, enlisted men, white.										Hawaii, enlisted men, colored.									
		S. G. O., 6,700—A. G. O., 7,021.										S. G. O., 1,883—A. G. O., 1,883.									
Serial Nos.	Internal classification.	Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.					
		Num-ber.	Ratio.	Num-ber.	Ratio.	Num-ber.	Ratio.	Num-ber.	Ratio.	Num-ber.	Ratio.	Num-ber.	Ratio.	Num-ber.	Ratio.						
																Num-ber.		Num-ber.		Num-ber.	
																(1)	(2)	(1)	(2)	(1)	(2)
Causes of admission to sick report.																					
1	1	4	0.00					0.03	0.00												
2	1a	1	.15					.24	.04												
7-11	4	15	2.24					.46	.07												
10		14	2.09					.45	.07												
11		1	.15					.01	.00												
13	5b	2	.30			2	0.28	.01	.00	2	1.07					0.01	0.01				
14	6	22	3.28					1.70	.26												
15	7	2	.30					.13	.02												
17	9	4	.60					.13	.02												
18	10	142	21.17					2.97	.44	15	8.05					.19	.10				
21-23	14	17	2.53					2.06	.31												
21		4	.60					.20	.03												
23		11	1.64					1.50	.22												
27		2	.30					.38	.06												
31	18	23	3.43					.08	.01												
34	19d	123	18.33					1.53	.23	3	1.61					.23	.12				
43-46	26	1	.15					7.21	1.07	16	8.59					.62	.44				
49-57	28-34	23	3.43					.02	.00												
49-51	28			8	1.14	1	.14	1.50	.22	8	4.29	3	1.61	3	1.07	.66	.47				
53	30	22	3.26	7	1.00	1	.14	1.40	.21	6	3.22	2	1.07	1	.54	.53	.29				
53-57	30-34	1	.15					.10	.03					1	.54						
59-74	37-38	671	92.56	1	.14			31.36	4.67	228	122.38	1				.36	.19				
59-64	37	160	23.85	3	.43			8.83	1.23	76	61.79	1				1.10	5.93				
																5.36	2.88				

TABLE No. 74.—Admissions to sick report, discharges, deaths, and non-effectiveness, with ratios per 1,000 of mean strength, for American troops, total officers and enlisted men, and separately for white and colored serving in Hawaii, year 1915—Continued.

Serial Nos.	Inter- national classi- fication.	Hawaii, enlisted men, white.										Hawaii, enlisted men, colored.									
		S. G. O., 6,700—A. G. O., 7,521.										S. G. O., 1,903—A. G. O., 1,953.									
		Mean strength.....		Admissions.		Discharges.		Deaths.		Non-effective.		Admissions.		Discharges.		Deaths.		Non-effective.			
		Num- ber.	Ratio.	Num- ber.	Ratio.	(1) (%)	(2) (%)	Num- ber.	Ratio.	Num- ber.	Ratio.	Num- ber.	Ratio.	(1) (%)	(2) (%)	Num- ber.	Ratio.	Num- ber.	Ratio.		
		Causes of admission to sick report.																			
		DISEASES AND INJURIES GROUPED.																			
1-19 20-59		1,117	166.60	17	2.42	5	0	0.85		53.62	7.99	304	163.16	4	2.15	2	1.07	13.88	7.45		
		359	53.51			2	2	.26		17.23	2.57	40	21.47					1.38	.74		
		758	112.98	17	2.42	3	4	.57		3.64	5.42	264	141.70	4	2.15	2	1.07	12.50	6.71		
60-74		170	26.34	36	5.12	2	2	.26		9.56	1.43	46	24.70	5	2.68			1.94	1.04		
		78	11.63	35	4.96	2	2	.26		5.43	.81	22	11.81	5	2.68			1.28	.66		
		52	7.90							2.04	.30	23	12.35					.70	.38		
75		20	5.61	1	.14					2.12	.32	1	.54					.01	.00		
77-85		93	13.71	8	1.14	2	2	.26		4.29	.64	30	16.10			2	1.07	1.43	.76		
86-95		204	43.83	7	1.00	1	1	.14		7.34	1.09	86	47.24	1	.54	1	.54	1.28	.69		
96-113		739	110.15	2	.26		1	.14		20.69	2.99	155	53.20			1	1.07	2.80	1.50		
119-127		57	12.97	3	.43	1	1	.14		4.96	.74	31	16.64					1.18	.63		
142-145		349	51.83							7.79	1.16	74	39.73					1.86	1.00		
146-149		125	18.63	3	.43					4.16	.62	29	15.57	1	.54			1.07	.59		

ratios per 1,000 of mean strength, for officers and enlisted men serving on Army trans-
for native troops in Philippine Islands, year 1915.

Porto Rico, officers and enlisted native troops.								Philippine Islands, native troops.							
S. G. O., 719—A. G. O., 719.								S. G. O., 5,505—A. G. O., 5,505.							
Admis- sions.		Discharges.		Deaths.		Non- effective.		Admis- sions.		Discharges.		Deaths.		Non- effective.	
Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
								2	0.36					0.19	0.04
								3	.54					.13	.02
6	8.34					0.24	0.34	441	80.11					8.50	1.54
								82	14.90					2.17	.39
								2	.36					.05	.01
								4	.73					.07	.01
6	8.34					.24	.34	202	53.04					5.19	.94
1	1.39					.16	.22	61	11.08					1.02	.19
								6	1.09					.18	.03
								8	1.45					.37	.07
2	2.78					.07	.10	9	1.63					.22	.04
								2	.36			1	0.18	.03	.01
16	22.25					.41	.56	55	9.99			1	.18	3.09	.56
								21	3.81					1.16	.21
9	12.52					.18	.24	28	5.09					1.62	.30
7	9.74					.23	.32	6	1.09			1	.18	.30	.05
55	76.50					2.83	3.94	92	16.71					1.56	.28
								2	.36					.06	.01
								17	3.09					.92	.17
1	1.39	1	1.47			.13	.18	25	4.54	25	4.54			3.17	.58
1	1.39	1	1.47			.13	.18	25	4.54	25	4.54			3.07	.56
														.10	.02
61	84.84	2	2.94			3.29	4.57	189	34.33	1	.18			10.79	1.96
18	25.04					.95	1.33	31	5.63					2.79	.51
19	26.43					1.21	1.68	17	3.09					.85	.15
24	33.38	2	2.94			1.12	1.56	141	25.61	1	.18			7.14	1.30
1	1.39					.06	.09	15	2.72					.55	.10
4	5.56					.30	.43	3	.54					.16	.03
1	1.39					.13	.18	3	.54					.16	.03
3	4.17					.17	.24								
2	2.78					.01	.02	1	.18					.00	.00
1	1.39					.46	.64								
		1	1.47			.08	.11	1	.18			1	0.18	.15	.03
1	1.39					.19	.26	13	2.36	10	2.91			.90	.16
								3	.54	1	.18			.10	.03
5	6.95					.12	.16	8	1.45	2	.36			.84	.15
2	2.78					.03	.04	67	12.17					.99	.18
								5	.91					.29	.05
1	1.39			1	1.39	.00	.00	2	.36			1	.18	.30	.05
								2	.36					.32	.06
				1	1.39										
								1	.18					.02	.00
								2	.36	1	.18			.16	.03
23	31.99					.76	1.06	16	2.91					.79	.14
20	27.82					.29	.40	10	1.82	1	.18			.10	.02
2	2.78					.11	.15	12	2.18					.30	.05
								157	28.52					2.62	.48
								9	1.63					.42	.08
								11	2.00			1	.18	.91	.17
1	1.39					.09	.13	12	2.18					.65	.12
								1	.18					.03	.01
4	5.56					.09	.12	7	1.27	1	.18			.41	.07
6	8.34					.06	.09	21	3.81					.33	.60

TABLE No. 75.—Admissions to sick report, discharges, deaths, and noneffectiveness, with ports, for officers and native troops serving in Porto Rico,

Serial Nos.	Inter-national classification.	Army transports, officers and enlisted men.								
		Mean strength.....	S. G. O., 1,385—A. G. O., 1,385.							
			Admissions.		Discharges.		Deaths.		Non-effective.	
			Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
228-231	99b	Other diseases of the mouth and annexa.....								
232-236	100	Diseases of the pharynx.....	73	52.71					0.79	0.57
238	102	Ulcer of stomach.....							.16	.12
239-244	103	Other diseases of stomach (cancer excepted).....	20	14.44					.47	.34
245-253	105	Diarrhea and enteritis.....	57	41.16					.76	.55
254	106	Ankylostomiasis.....								
255-259	107	Intestinal parasites.....	1	.72					.01	.00
260	108	Appendicitis.....	4	2.89					.27	.20
261-263	109	Hernia.....	1	.72			1	0.72	.33	.24
264-267	110a	Diseases of the anus and fecal fistula.....								
268-272	110b	Other diseases of the intestines.....	14	10.11					.79	.57
276	114	Biliary calculi.....	1	.72					.08	.06
277-281	115	Other diseases of liver and gall bladder.....	5	3.61					.27	.20
288	119	Acute nephritis.....	3	2.17					.11	.08
289-291	120	Bright's disease.....							.41	.30
293-299	122	Other diseases of the kidney and annexa.....							.08	.06
303-306	124	Diseases of the bladder.....	1	.72					.59	.43
304	124b	Enuresis.....							.59	.42
307-309	125	Diseases of the urethra, urinary abscess, etc.....							.00	.00
310-312	126	Diseases of the prostate.....							.08	.06
313-319	127	Diseases of the male genital organs (non-venereal).....	4	2.89					.07	.05
322-323	143	Furuncle and carbuncle.....	3	2.17					.02	.02
324-325	144	Acute abscess and cellulitis.....	9	6.50					.34	.25
352-357	146	Diseases of the bones.....	3	2.17					.11	.08
358-360	147	Diseases of the joints.....							.65	.47
367	149g	Flat foot.....							4.13	2.99
372	150	Congenital malformations.....	1	.72					.02	.01
375	189Aa	Febricula, simple continued, and other fevers of undetermined causation.....								
379	189Ba	Under observation, undiagnosed and unknown.....							.15	.11
		AFFECTIONS PRODUCED BY EXTERNAL CAUSES. ¹								
426-434	155-163	Suicides, all.....								
435	164	Poisoning by food.....								
436	165a	Venomous bites and stings.....								
437	165b	Other poisoning (deleterious gases excepted).....								
438	166	Conflagration.....								
439	167	Burns (conflagrations excepted).....	1	.72						
441	168a	Suffocation, strangulation.....								
442	169	Drowning, accidental.....					1	.72		
443	170	Traumatism by firearms (other than specified).....								
445	171	Traumatism by cutting or piercing instruments.....	5	3.61						
446	172	Traumatism by fall.....	14	10.11						
448	174	Traumatism by machines.....	2	1.44						
449	175	Traumatism by other crushing.....	2	1.44						
450	176	Injuries by animals.....								
453	179	Effects of heat.....	1	.72						
456-458	182-4	Homicides, all.....								
459	185	Fractures, causes not specified.....								
460	186	Other external violence.....	9	6.50						
462		Killed or wounded in action:								
463		By bullet.....								
463		By shell.....								

¹ Noneffectiveness for individual external causes not tabulated.

ratios per 1,000 of mean strength, for officers and enlisted men serving on Army trans-
for native troops in Philippine Islands, year 1915—Continued.

Porto Rico, officers and enlisted native troops.								Philippine Islands, native troops.							
S. G. O., 719—A. G. O., 719.								S. G. O., 5,505—A. G. O., 5,505.							
Admis- sions.		Discharges.		Deaths.		Non- effective.		Admis- sions.		Discharges.		Deaths.		Non- effective.	
Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
								5	0.91					0.12	0.02
6	8.34					0.10	0.13	39	7.08					.58	.11
2	2.78					.06	.09	21	3.81					0.20	0.04
14	19.47					.27	.37	207	37.60					2.47	.45
4	5.56					.18	.26	52	9.45	1	0.18	1	0.18	1.05	.19
								33	5.99					.69	.12
								4	.73			1	.18	.15	.03
								4	.73					.46	.08
1	1.39					.04	.05	5	.91					.14	.03
5	6.95					.07	.09	332	60.31					3.43	.62
								1	.18					.02	.00
2	2.78					.02	.03	3	.54					.96	.17
1	1.39					.06	.09	1	.18					.04	.01
								3	.54			1	.18	.18	.03
10	13.91					.53	.74	20	3.63					.41	.07
18	25.03					.37	.51	116	21.07					2.62	.48
32	44.51					.84	1.16	201	36.51					5.67	1.03
1	1.39					.11	.15	15	2.72	1	.18			.70	.13
2	2.78	1	1.47			.69	.96	12	2.18	1	.18			.55	.10
								5	.91	1	.18			.17	.03
5	6.95					.08	.12	32	5.91					.68	.12
3	4.17					.22	.30	3	.54					.28	.05
												1	.18		
								2	.33						
1	1.39							3	.54						
								1	.18						
								2	.36						
2	2.78							13	2.36						
								1	.18						
1	1.39							7	1.27	1	.18	1	.18		
6	8.34							62	11.26			1	.18		
12	16.69							133	24.16	2	.36				
2	2.78														
1	1.39							18	3.27						
1	1.39							3	.54						
				1	1.39			15	2.72						
								2	.36			2	.36		
								3	.54						
14	19.47							235	42.69						
								1	.18	2	.36				
								1	.18	2	.36				

TABLE No. 76.—Admissions to sick report, discharges, deaths, and noneffectiveness, expressed in ratios per 1,000 of mean strength, for American troops (enlisted men) on duty at home stations, placed in comparison with the same data for those serving at distant stations, year 1915.

Serial No.	International classification.	Causes of admission to sick report.	United States.				Philippine Islands.				Hawaii.				Alaska.			
			Admissions.	Discharges.	Deaths.	Noneffective.	Admissions.	Discharges.	Deaths.	Noneffective.	Admissions.	Discharges.	Deaths.	Noneffective.	Admissions.	Discharges.	Deaths.	Noneffective.
1	1		0.05			0.01	0.05				0.47			0.07				
2	1a		0.01				0.01			0.01	0.12			0.03	1.31			0.01
3-11	4		12.12		0.03	0.27	63.12			1.14	1.76			0.05	1.31			0.01
7			1.95		0.03	0.04	11.07			0.24					1.31			0.01
8			0.08			0.01	0.25			0.01								
9		Malarial cachexia.	0.17			0.00	0.34			0.00	1.03			0.05	0.00			
10		Quarantined malarial fever.	9.27			0.20	50.01			0.85	1.03			0.05	0.00			
11			1.15			0.02	1.44			0.05	1.12			0.00				
12		fever.	0.05			0.00				0.01								
13	5		5.71			0.07					0.47			0.00				
14	5b	Vaccinia.	8.71	0.12	0.31	0.57	1.94			0.15	2.57	0.23		0.00				
15	6	Measles.	7.4		0.03	0.07					0.23			0.01				
16	7	Scarlet fever.	1.88			0.04	0.08		0.05	0.00	0.47			0.02				
17	8	Diphtheria.	42.05		0.06	0.54	3.21			0.06	18.31			0.57	9.17			0.14
18	9	Influenza.	0.02															
19	10	Cholera nostras.	1.41	0.06		0.11	5.32	0.08	0.17	0.31	1.98			0.24	1.31			0.02
20	11	Dysentery.	0.16			0.01	0.17			0.01	0.47			0.02				
21	12	Bacillary.	0.91	0.06		0.10	4.90	0.08	0.17	0.29	1.28			0.17	1.31			0.02
22	13	Enterocolic.	3.35			0.01	0.25			0.01	0.23			0.04				
23	14	Unclassified.	3.30	0.02	0.02	0.01	0.08			0.00	0.23			0.01				
24	15	Erysipelas.	0.80			0.01	131.31			1.94								
25	16	Dengue.	7.72			0.02					3.02			0.20				
26	17		8.02			0.36	13.01			0.53	16.23			0.04				
27	18	Measles.	0.08		0.06	0.00	0.25		0.25	0.00	0.12			0.00				
28	19		0.02			0.00	0.42	3.28	0.50	0.50	2.02	1.24	0.34	0.28	1.31			0.15
29	20		2.08	1.07	0.28	2.33	6.42	3.28	0.50	0.47	3.77	1.01	0.23	0.23	1.31			0.15
30	21		2.46	1.50	0.20	2.27	6.25	3.20	0.50				0.11	0.01				
31	22	typh.	0.02		0.02	0.07					0.12							
32	23	parat.	0.21	0.09	0.07	0.01	1.16	0.08		0.03	0.23	0.23		0.04				
33	24		93.60	0.06	0.06	3.99	186.33	0.93	0.08	8.10	99.04	0.56	0.11	4.06	35.39			0.54
34	25		17.24	0.54	0.05	1.22	40.75	0.50	0.08	1.80	27.53	0.46		1.05	3.93			0.16
35	26		15.80	0.03		0.72	28.02			1.17	11.20			0.43	7.86			0.03
36	27		50.56	0.31	0.02	2.05	107.57	0.42		5.04	60.31	0.11	0.11	2.57	22.59			0.35
37	28	tumors.	0.27	0.05	0.14	0.07	1.17			0.03				0.00	1.31			0.01
38	29		1.43		0.02	0.04	0.90			0.06	0.47			0.00	1.31			0.01
39	30	Rheumatism, articular, all.	0.65	0.26		0.47	3.28	0.08		0.25	3.88	0.11		0.25	5.34			0.08

81-83	47	8.55	.04	.....	.08	.....	.16	2.45	.....	.11	.....	.15	3.93	.....	.05	.....
84-86	48	1.10	.20	.....	.76	.....	.10	.90	.....	.11	.....	.08	1.31	.....	.01	.....
87-88	49	.20	.02	.06	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
89	50	.25	.12	.....	.34	.08	.03	.12	.....	.....	.....	.03	1.31	.....	.....	.....
90-92	51	15.07	.20	.06	.....	.....	.21	11.55	.45	.23	.....	.18	10.48	1.21	.08	.....
93-95	52	.08	.....	.....	.....	.....	.01	.....	.....	.....	.....	.....	.....	.....	.....	.....
96-98	53	.39	.03	.....	.42	.50	.04	.70	.....	.....	.....	.01	1.31	.....	.01	.....
99	54	.03	.03	.....	.....	.....	.02	.....	.....	.....	.....	.....	.....	.....	.....	.....
100-102	55	.36	.08	.14	.....	.....	.05	.12	.....	.11	.....	.06	.....	.....	.....	.....
103-105	56	.14	.03	.....	.26	.08	.04	.....	.....	.....	.....	.....	.....	.....	.....	.....
106-108	57	.06	.05	.....	.23	.08	.02	.12	.....	.11	.....	.04	.....	.....	.....	.....
109-111	58	.11	.....	.09	.....	.....	.00	.12	.....	.11	.....	.00	.....	.....	.....	.....
112-114	59	.27	.06	.....	.08	.....	.03	.70	.....	.....	.....	.03	10.48	3.93	1.31	.28
115-117	60	3.04	2.54	.06	7.27	7.99	.95	4.55	3.60	.11	.....	.35	10.48	3.93	1.31	.....
118-120	61	1.16	.60	.....	1.52	1.35	.16	1.17	.56	.....	.....	.09	.....	.....	.....	.....
121-123	62	5.57	.25	.13	3.90	.34	.28	4.08	.11	.....	.....	.16	6.55	1.31	.21	.....
124-126	63	3.94	.03	.....	5.83	.....	.08	3.03	.....	.....	.....	.10	.....	.....	.....	.....
127-129	64	.09	.....	.....	.17	.....	.01	.47	.....	.....	.....	.04	.....	.....	.....	.....
130-132	65	.06	.....	.....	.....	.....	.00	.....	.....	.....	.....	.01	.....	.....	.....	.....
133-135	66	.08	.02	.....	.17	.08	.00	.12	.....	.23	.....	.00	.....	.....	.....	.....
136-138	67	1.05	.44	.29	1.55	.67	.18	1.03	.79	.23	.....	.12	.....	.....	.....	.....
139-141	68	.14	.02	.03	.06	.....	.00	.....	.....	.....	.....	.00	.....	.....	.....	.....
142-144	69	.17	.02	.08	.17	.08	.04	.....	.....	.11	.....	.....	.....	.....	.....	.....
145-147	70	.03	.02	.02	.....	.....	.00	.....	.....	.....	.....	.....	.....	.....	.....	.....
148-150	71	5.90	.03	.....	5.49	.....	.17	.....	.....	.....	.....	.....	.....	.....	.....	.....
151-153	72	.60	.03	.....	.50	.....	.00	.....	.....	.....	.....	.18	.....	.....	.....	.....
154-156	73	2.54	.02	.....	3.89	.....	.13	1.75	.....	.....	.....	.10	.....	.....	.....	.....
157-159	74	6.66	.....	.....	10.05	6.66	.14	2.57	.....	.....	.....	.06	.....	.....	.....	.....
160-162	75	15.93	.02	.....	7.86	.....	.80	10.38	.11	.....	.....	.15	6.55	.....	.....	.....
163-165	76	3.03	.....	.....	1.41	.....	.06	.....	.....	.....	.....	.15	.....	.....	.....	.....
166-168	77	.13	.05	.....	17	.....	.03	.....	.....	.....	.....	.04	7.86	.....	.....	.....
169-171	78	36.93	.03	.02	25.24	.06	.62	1.17	.11	.....	.....	.04	.....	.....	.....	.....
172-174	79	.69	.02	.04	.....	.....	.05	28.93	.23	.....	.....	.58	28.93	.....	.....	.....
175-177	80	2.75	.....	.42	2.30	.....	.20	.58	.....	.....	.....	.03	1.31	.....	.....	.....
178-180	81	2.71	.11	.05	3.72	.....	.23	1.17	.....	.....	.....	.06	1.31	.....	.....	.....
181-183	82	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
184-186	83	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
187-189	84	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
190-192	85	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
193-195	86	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
196-198	87	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
199-201	88	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
202-204	89	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
205-207	90	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
208-210	91	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
211-213	92	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
214-216	93	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
217-219	94	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
220-222	95	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
223-225	96	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
226-228	97	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
229-231	98	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
232-234	99	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
235-237	100	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
238-240	101	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
241-243	102	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
244-246	103	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
247-249	104	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
250-252	105	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
253-255	106	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
256-258	107	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
259-261	108	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
262-264	109	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
265-267	110	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
268-270	111	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
271-273	112	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
274-276	113	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
277-279	114	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
280-282	115	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
283-285	116	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
286-288	117	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
289-291	118	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
292-294	119	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
295-297	120	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
298-300	121	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
301-303	122	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
304-306	123	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
307-309	124	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
310-312	125	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
313-315	126	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
316-318	127	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
319-321	128	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
322-324	129	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
325-327	130	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
328-330	131	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
331-333	132	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
334-336	133	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
337-339	134	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
340-342	135	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
343-345	136	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
346-348	137	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
349-351	138	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
352-354	139	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
355-357	140	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
358-360	141	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
361-363	142	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
364-366	143	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
367-369	144	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
370-372	145	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
373-375	146	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
376-378	147	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
379-381	148	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
382-384	149	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
385-387	150	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
388-390	151	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
391-393	152	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

TABLE No. 76.—Admissions to sick report, discharges, deaths, and noneffectiveness, expressed in ratios per 1,000 of mean strength, for American troops (enlisted men) on duty at home stations, placed in comparison with the same data for those serving at distant stations, year 1915—Continued.

Serial Nos.	International classification.	Causes of admission to sick report.	Panama.				China.				Transports.				Army.			
			Admissions.	Discharges.	Deaths.	Noneffective.	Admissions.	Discharges.	Deaths.	Noneffective.	Admissions.	Discharges.	Deaths.	Noneffective.	Admissions.	Discharges.	Deaths.	Noneffective.
1	1	Typhoid fever.....													0.08			0.01
2	1a	Paratyphoid fever.....													.06			.01
7-11	4	Malaria.....	87.57			2.32	21.72			0.40	12.20			0.28	22.66		0.02	.48
7		Estivo-autumnal fever.....	48.59			1.41	.75			.04					5.74		.02	.15
8		Malarial cachexia.....												.04	.09			.01
9		Quartan malarial fever.....													.16			.00
10		Tertian malarial fever.....	31.99			.72	18.78			.83	12.20			.24	15.24			.30
11		Undetermined malarial fever.....	6.99			.19	2.25			.03					1.44			.03
12	5	Smallpox and varioloid.....													.04			.00
13	5b	Vaccinia.....	.35			.00					.76			.00	.04			.05
14	6	Measles.....	.87			.04	.75			.06	20.58			.68	3.98		.23	.42
15	7	Scarlet fever.....									.76			.06	6.79	0.08	.01	.05
17	9	Diphtheria.....													.65		.01	.03
18	10	Influenza.....	47.37			.76	28.22			.35	6.10			.08	34.27		.04	.46
20	13	Cholera nostras.....													.01			.00
21	14	Dysentery.....	1.05			.08	1.50			.29	3.05			.59	1.96	.05	.02	.16
21		Bacillary.....	.17			.01									.18			.01
22		Entamoebic.....	.87			.07	1.50			.29	2.29			.57	1.48	.05	.02	.13
23		Unclassified.....									.76			.02	.30			.61
27	18	Erysipelas.....	.17			.00									.26	.01	.01	.01
29	19b	Dengue.....	3.67			.09					2.29			.14	17.47			.26
31	19d	German measles.....	.35			.01	.75			.03					.80			.04
34	19k	Mumps.....	7.17			.20	5.24			.41	80.79			1.65	10.27			.48
37	20	Purulent infection and septicemia.....													.08		.07	.00
42-46	25	Mycoses.....													.02			.00
49-57	28-34	Tuberculosis, all.....	6.12	1.69	0.34	.36	5.24	1.50	1.50	.73	5.34			6.00	3.52	1.79	.33	1.80
49-51	28	Tuberculosis of lungs.....	5.07	1.35		.21	2.25	1.50	.75	.44	5.34			5.87	3.20	1.69	.24	1.73
52	29	Miliary tuberculosis, acute.....	.17		.17	.03	.75		.75	.03					.04		.04	.01
53-57	30-34	Tuberculosis of other organs.....	.87	.34	.17	.11	2.25			.25				.14	.26	.10	.04	.06
59-74	37-38	Veneral diseases, all.....	136.51	.68		6.21	504.12	.75		14.01	138.72			2.92	197.71	.82	.06	4.78
59-64	37	Syphilis.....	15.91	.17		.88	50.94	.75		2.62	9.91			1.48	21.35	.50	.04	1.34
66-67	38a	Soft chancre.....	52.44			2.01	214.23			4.80	31.23			.06	23.44	.02		.87
68-74	38b	Gonococcus infection.....	68.17	.51		2.32	238.96			6.59	97.56			1.38	62.91	.31	.02	2.56
75-79	39-45	Cancer and other malignant tumors.....	.35			.03				.09					.24	.05	.10	.06
80	46	Foreign tumors.....	1.75			.02	1.50			.09					1.23		.01	.09
81-85	47-48	Rheumatism, articular, all.....	4.51			.21	11.24			.23	3.81			.49	5.63	.20		.41

TABLE No. 76.—Admissions to sick report, discharges, deaths, and noneffectiveness, expressed in ratios per 1,000 of mean strength, for American troops (enlisted men) on duty at home stations, placed in comparison with the same data for those serving at distant stations, year 1915—Continued.

Serial Nos.	International classification.	Causes of admission to sick report.	Panama.				China.				Transports.				Army.			
			Admissions.	Discharges.	Deaths.	Noneffective.	Admissions.	Discharges.	Deaths.	Noneffective.	Admissions.	Discharges.	Deaths.	Noneffective.	Admissions.	Discharges.	Deaths.	Noneffective.
200	108	Appendicitis	16.08	0.34	0.17	1.08	9.74			0.31	3.06			0.21	8.74	0.04	0.13	0.53
201-203	109	Hernia	6.59			.46	6.74			.51	.76		0.76	.25	3.79	.20	.08	.38
204-207	110a	Diseases of the anus and fecal fistula	.53			.03	.75			.07					.81			.05
208-272	110b	Intestines	45.10	.17		.53	108.61			1.06	10.67			.60	29.73	.06		.39
273	113														.03	.01	.01	.01
276	114		.17			.00					.76			.05	.10	.01		.01
277-281	115	and gall bladder	4.20			.19	8.24			.35	8.81			.21	4.17	.02	.01	.19
282-284	117														.01			.02
285	119		.17		.17	.01				.09	2.29			.09	.34		.06	.03
286-291	120	Other diseases of the kidney and ureters	.70			.05	1.50			.09				.28	.53	.13	.10	.10
292-299	123	Extra																
300-306	124	Diseases of the kidney and ureters	.17			.02								.08	.29	.01		.04
307-324	124b	Diseases of the bladder	1.40			.03	2.26			.13	.76			.45	2.10	.35		.14
325-330	126	Entritis	.17			.00	2.26			.13				.45	1.17	.35		.11
331-336	126	Diseases of the urethra—urinary abscess, etc.	.67			.02	8.99			.11				.00	1.53	.01		.04
337-342	126		.17			.01								.06	.16	.01		.02
343-348	143		3.50			.11	3.75			.10	3.06			.06	4.32	.01		.13
349-354	144		27.62			.42	17.96			.39	2.29			.02	17.42			.39
355-360	146		8.74			.29	22.47			.51	6.86			.26	12.44	.01	.03	.34
361-366	147		1.75			.13					2.29			.09	2.53	.06	.01	.16
367-372	147		4.54	.17		.26	14.98			.60				.43	4.10	.24		.33
373-378	148a		5.43	2.03		.43	4.49			.13				2.15	2.71	1.25		.26
379-384	154		8.94			.13	5.24			.14	.76			.01	8.94	.01		.13
385	156Aa														.02			.09
386	156Ba		.35			.01	8.09			.23					1.99			.04
387	156Bb		1.22			.01	.76			.01				.10	.65		.01	.04
388	156Bc		.70			.01									.38			.01
389-404	155-156	ATTACKS PRODUCED BY INTERNAL CAUSES. ¹																
405	156	Scalds, all	.67		.34										.14		.26	
	156	Poisoning by food							6.75						2.46		.61	

1000	General	6.70																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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• **Nonflexive** systems (or individual systems) not included.

TABLE No. 79.—Showing the most important diseases, by departments, in the United States (continental, excluding Alaska), 1915—officers and enlisted men.

ADMISSION, ABSOLUTE NUMBERS.

Diseases.	Eastern Department.	Central Department.	Western Department.	Recruit depots.	Independent stations.	Second division, Texas City.	Troops on the Mexican border.	Total.
1. Alcoholismus, acutus, including delirium tremens.	329	26	79	66	23	31	86	777
2. Appendicitis, typical, peritonitis.	189	22	89	32	7	22	90	506
3. Bronchitis acuta.	655	86	379	461	67	12	499	2,414
4. Cholera Asiatica.	1							1
5. Cholera nostras.	2			4	2	2	3	90
6. Diphtheria.	15	8	31	11		9	25	107
7. Dysentery.	7		2	1			4	19
8. Erysipelas.	200	22	31	74	12	1	116	618
9. Febris intermittens (malaria).								
10. Febris recurrens.								
11. Fractura osium.	238	59	122	77	15	7	86	876
12. Gonorrhoea.	839	134	435	343	49	26	433	2,227
13. Haemorrhoids.	67	12	39	50	5	8	87	259
14. Insomnia.	734	233	386	248	120	44	72	2,919
15. Insolation (Hitzeschlag coup de chaleur).				9	4		4	7
16. Luxationes articulum.	61	14	14				21	102
17. Meningitis, cerebrospinalis, epidemica.	7			8			4	23
18. Morbilli.	36	9	35	263			76	556
19. Parotitis epidemica.	173	14	35	125	5	1	118	514
20. Peritonitis.	63	6	13	18	8	4	59	179
21. Pneumonia crepuscularis lobaris.	80	7	10	52	7	1	27	179
22. Rheumatismus articulorum.	111	9	36	81	9	16	31	438
23. Scarlatina.	1	5	1	23	1	3	10	49
24. Scorbutus.								
25. Syphilis.	308	51	115	123	20	40	126	1,104
26. Trachoma.		1	4				1	7
27. Tuberculosis pulmonum.	46	8	22	15	2	8	32	164
28. Tuberculosis ceterorum organorum.	9		1	3	1	1		15
29. Typhus abdominalis.	2							4
30. Typhus exanthematicus.								
31. Ulcus molle.	197	14	48	70	6	3	207	1,009
32. Varicella.			1					3
33. Morbilli auris.	106	18	23	62	5	9	61	338
34. Morbilli cordis.	25	8	10	4	3	5	17	81
35. Morbilli cutis.	449	47	131	165	16	12	266	1,291
36. Morbilli mentis.	46	13	24	36	6	20	21	200
37. Morbilli oculi.	163	33	30	48	12	9	151	619
38. Morbilli stomat. urinae, et sexual (excluding venereal syphilis).	187	42	69	96	20	21	108	682

ADMISSIONS PER 1,000 OF MEAN STRENGTH, PROPORTIONATE NUMBER.

Diseases.	Eastern Department.	Central Department.	Southern Department.	Western Department.	Recruit depots.	Independent stations.	Second division, Texas City.	Troops on the Mexican border.	Total.
1. Tremens.	16.32	8.32	10.94	9.59	12.25	10.35	11.35	5.80	11.63
2.	9.40	7.32	3.47	7.16	6.03	3.15	7.75	6.07	7.58
3.	32.58	28.28	29.79	33.86	86.85	30.17	27.41	33.64	36.14
4. ....	.05								.01
5.	10		2.45	3.76	.75	.90	.42	.20	.90
6. ....	.75	2.66	1.70	1.46	2.07		2.49	1.69	1.90
7. ....	.35		.57	.24	.19		.28	.27	.28
8.	9.95	7.32	11.69	3.76	13.94	5.40	13.85	7.82	9.25
9.									
10.	11.94	19.63	21.50	14.81	14.50	6.75	11.91	10.65	13.11
11.	41.74	44.57	59.40	52.80	64.62	22.06	59.95	44.08	48.32
12.	3.33	3.99	2.83	4.73	9.42	2.25	3.60	2.49	3.88
13.	36.51	77.51	22.63	46.73	46.72	54.03	9.97	64.92	43.71
14. ....			.19				.28	.27	.10
15.	3.03	4.66	2.64	1.70	1.70	1.80	2.91	2.03	2.72
16. ....	.35		.38		1.51		.55	.13	.34
17.	1.79	2.99	3.77	4.26	49.55		10.36	7.95	8.33
18.	8.61	4.66	0.60	4.37	23.56	2.25	9.14	2.98	7.70
19.	2.59	2.00	2.45	1.58	3.39	3.60	3.18	2.83	2.68
20.	2.40	2.33	1.88	.97	9.80	3.15	.97	2.40	2.08
21.	5.52	2.99	3.20	4.61	15.26	4.05	4.29	8.49	6.56
22. ....	.05	1.66	.75	.22	4.33	.45	.14	.67	.73
23.									
24.	15.32	16.97	26.27	13.96	23.17	9.00	19.11	11.80	16.53
25. ....		.33		.48			.14	.07	.10
26.	2.24	2.66	3.02	2.67	2.83	.90	2.22	2.16	2.46
27. ....	.45			.12	.57	.45			.22
28. ....	.10		.19					.07	.06
29.									
30.	9.80	4.66	26.21	5.83	14.88	2.70	28.91	20.69	15.11
31. ....			.19	.12			.14		.04
32.	5.27	5.99	3.20	2.79	11.68	2.25	4.85	4.11	5.03
33. Morbi cordis.	1.24	2.66	.38	1.21	.75	1.35	.97	1.15	1.21
34. Morbi cutis.	22.34	15.64	18.48	15.90	31.08	7.20	16.20	17.26	19.33
35. Morbi mentis.	2.24	5.99	3.77	2.91	6.78	2.70	1.38	1.42	2.00
36. Morbi oculi.	8.11	10.96	7.35	9.71	9.04	5.40	10.36	10.18	9.13
37. Morbi systemat. urin. et sexual. (excluding venereal syphilis).	9.30	13.97	10.56	8.37	18.09	9.00	7.62	7.15	9.79

TABLE No. 80.—Comparative figures, enlisted American troops, Army, 1911-1915.
ABSOLUTE NUMBERS.

Army.	Mean strength.	Admissions to sick report.		Discharges on certificate of disability.		Deaths.		Total losses.		Total days.			Constantly noneffective.		
		From all causes.	Excluding injuries, venereal diseases, alcoholism, and vaccinia.	From all causes.	Excluding injuries, venereal diseases, alcoholism, and vaccinia.	From all causes.	Excluding injuries, venereal diseases, alcoholism, and vaccinia.	From all causes.	Excluding injuries, venereal diseases, alcoholism, and vaccinia.	From all causes.	Excluding injuries, venereal diseases, alcoholism, and vaccinia.	In hospital.	Total.	In hospital.	Excluding injuries, venereal diseases, alcoholism, and vaccinia.
1915.....	93,262	69,442	45,210	1,351	1,110	436	234	1,787	1,344	880,823	763,983	555,810	2,413.21	2,093.10	1,522.77
1914.....	87,228	58,079	35,502	1,145	921	392	195	1,537	1,116	764,983	681,082	467,990	2,095.57	1,974.20	1,281.89
1913.....	80,766	54,257	33,459	1,082	865	397	202	1,479	1,067	717,149	659,086	447,061	1,964.79	1,805.72	1,151.28
1912.....	78,267	64,487	39,952	1,069	844	381	169	1,450	1,013	862,221	790,213	494,236	2,355.80	2,159.05	1,255.52
1911.....	72,748	68,073	39,364	1,011	799	348	181	1,359	980	883,646	798,382	465,853	2,420.95	2,187.35	1,195.98

PROPORTIONATE NUMBERS.

Army.	Mean strength.	Admissions to sick report.		Discharges on certificate of disability.		Deaths.		Total losses.		Noneffective from sickness.			Average number of days lost.		
		From all causes.	Excluding injuries, venereal diseases, alcoholism, and vaccinia.	From all causes.	Excluding injuries, venereal diseases, alcoholism, and vaccinia.	From all causes.	Excluding injuries, venereal diseases, alcoholism, and vaccinia.	From all causes.	Excluding injuries, venereal diseases, alcoholism, and vaccinia.	From all causes.	Excluding injuries, venereal diseases, alcoholism, and vaccinia.	In hospital.	For each soldier.	For each case.	Excluding injuries, venereal diseases, alcoholism, and vaccinia.
1915.....	93,262	744.59	484.76	14.26	11.72	4.60	2.47	18.86	14.19	25.88	22.44	16.33	9.44	12.68	5.96
1914.....	87,228	645.83	407.00	12.99	10.45	4.45	2.21	17.44	13.45	24.02	21.49	14.70	8.77	13.17	5.36
1913.....	80,766	671.78	414.27	13.24	10.59	4.85	2.47	18.10	13.06	24.33	22.35	15.17	8.88	13.22	5.53
1912.....	78,267	823.94	510.46	13.43	10.60	4.79	2.12	18.22	12.72	30.10	27.58	17.25	11.02	13.37	6.31
1911.....	72,748	935.74	541.10	13.85	10.94	4.77	2.48	18.62	13.42	33.28	30.07	17.54	12.15	12.98	6.40

TABLE No. 81.—*Ratios per 1,000 of mean strength for "total admissions" and for "case admissions" for enlisted American troops in the Army (as a whole), in the United States (continental), excluding Alaska, and in the Philippine Islands, for the years 1904 to 1911, for disease, external causes, and all causes.*

Year.	Enlisted American troops.	Army.		United States (continental), excluding Alaska.		Philippine Islands.	
		Total admissions.	Case admissions.	Total admissions.	Case admissions.	Total admissions.	Case admissions.
1904	Diseases.....	1,114	1,002	1,049	951	1,473	1,293
	External causes.....	241	228	257	242	215	204
	All causes.....	1,355	1,230	1,306	1,193	1,688	1,497
1905	Diseases.....	1,058	975	998	921	1,387	1,260
	External causes.....	238	226	252	239	213	207
	All causes.....	1,296	1,201	1,250	1,160	1,600	1,467
1906	Diseases.....	1,053	987	944	879	1,494	1,409
	External causes.....	224	216	236	226	206	202
	All causes.....	1,277	1,203	1,180	1,105	1,700	1,611
1907	Diseases.....	1,005	926	956	885	1,260	1,153
	External causes.....	213	206	216	208	223	216
	All causes.....	1,218	1,132	1,172	1,093	1,483	1,369
1908	Diseases.....	963	891	922	860	1,208	1,097
	External causes.....	225	217	227	219	232	222
	All causes.....	1,188	1,108	1,149	1,079	1,440	1,319
1909	Diseases.....	866	791	822	750	1,156	1,062
	External causes.....	197	190	202	195	192	185
	All causes.....	1,063	981	1,024	945	1,348	1,247
1910	Diseases.....	766	707	715	662	1,048	956
	External causes.....	184	178	184	178	195	188
	All causes.....	950	885	899	840	1,243	1,144
1911	Diseases.....	770	718	726	680	1,028	947
	External causes.....	166	161	162	157	190	185
	All causes.....	936	879	888	837	1,218	1,132

INTERNATIONAL MILITARY MEDICAL STATISTICS FOR THE YEAR 1915.

These tables are those agreed upon at the International Commission for the Unification of the Medical Statistics of Armies, held at Budapest in 1894, at Madrid in 1903, and modified by the last meeting held at Berlin in 1907. They are calculated for the United States Army proper (white and colored) and include enlisted men only. Dispositions include cases remaining from last year. Deaths include suicides and accidents. Days lost include those lost this year by cases remaining from last year.

Table I shows in absolute numbers, by divisions, the mean strength of the command, the admissions to quarters, to hospital, and total admissions; the disposition of the sick, total, and the number returned to duty, died, and otherwise disposed of, and the total number of days' sickness.

Table II gives the same data in ratios per 1,000, and also shows the days lost per soldier and per admission.

Table III shows, by arms of service, the mean strength, the total admissions, and those admitted to hospital only, the total dispositions, and the number of those returned to duty, and the number that died.

Table IV gives the same data as Table III by months.

Table V shows for each of the larger garrisons the mean strength, admissions to hospital, total admissions, and the deaths.

Table VI shows for each of the 38 diseases or disease groups agreed upon by the international commission, the number remaining under treatment at the commencement and close of the current year, the admissions and dispositions for the year, the total sick days, and the average number of days per case.

Table VII shows the admissions, by arms of service, for the diseases and disease groups referred to in Table VI.

Table VIII shows the same data as Table VII by months.

Table IX shows deaths by rank, by length of service, and by age.

Table X shows the same data as Table IX for discharges for physical disability.

INTERNATIONAL TABLE I.—*Movement of sick by Army corps (departments).*

ABSOLUTE NUMBERS (ENLISTED MEN).

	Mean strength.	Admitted sick.			Sick disposed of.				Total days sick.
		Total.	To hospital.	To quarters.	Returned to duty recovered.	Died.	Otherwise disposed of.	Total.	
United States (excluding Alaska):									
Eastern Department....	19,145	12,527	11,086	1,441	11,495	74	204	11,773	115,008
Central Department.....	2,748	2,224	1,846	378	2,118	5	58	2,181	21,951
Southern Department (excluding Cavalry division).....	5,073	3,531	3,246	185	4,839	48	307	5,194	91,536
Western Department....	7,898	4,395	3,577	818	3,119	20	58	3,197	32,355
Second tactical division..	6,895	4,815	2,902	1,913	4,341	45	90	4,476	50,318
Mexican border (field)...	14,239	10,273	3,349	6,924	8,103	52	66	8,221	67,062
Independent stations....	2,016	1,025	555	470	952	10	18	980	7,935
Recruit depots.....	5,202	5,567	5,389	178	5,160	49	201	5,410	60,418
General hospitals.....	509	506	484	22	1,998	46	454	2,498	152,099
Total.....	63,725	44,863	32,534	12,329	42,125	349	1,456	43,930	508,677
Alaska ¹	763	295	254	41	259	2	10	271	2,482
Canal Zone, Panama ¹	5,721	4,983	2,755	2,228	4,592	14	115	4,721	54,290
Hawaiian Department.....	8,572	4,877	4,497	380	4,098	27	145	4,870	63,939
China ¹	1,335	1,952	1,403	549	1,711	6	31	1,748	17,054
Philippine Department.....	11,834	11,721	10,910	811	10,980	34	524	11,538	125,910
Army transports.....	1,312	751	615	136	456	4	7	467	18,471
Army.....	93,262	69,442	52,968	16,474	64,821	436	2,288	67,545	880,828

¹ Separated from the department to which they belong for purposes of comparison.

INTERNATIONAL TABLE II.—*Movement of sick, by Army corps (departments).*

PROPORTIONATE NUMBERS (ENLISTED MEN).

	In 1,000 of mean strength.			In 1,000 disposed of.			Days lost.	
	Total ad- missions.	Admis- sions to hospital.	Deaths.	Returned to duty (recov- ered).	Died.	Other- wise dis- posed of.	Per sol- dier.	Per admis- sion.
United States (excluding Alaska):								
Eastern Department.....	654.32	579.05	3.87	976.39	6.28	17.33	6.00	9.18
Central Department.....	809.32	671.76	1.82	971.11	2.29	26.59	7.99	9.87
Southern Department (ex- cluding troops on Mexican border).....	606.04	639.86	9.46	931.65	9.24	59.11	18.04	25.92
Western Department.....	556.47	452.90	2.53	975.60	6.26	18.14	4.10	7.36
Second tactical division.....	698.33	420.88	6.53	969.84	10.05	20.11	7.30	10.45
Mexican border.....	721.47	235.20	3.65	985.65	6.33	8.03	4.71	6.53
Independent stations.....	508.43	275.30	4.96	971.43	10.20	18.37	3.94	7.74
Recruit depots.....	1,070.17	1,035.95	9.42	953.79	9.06	37.15	11.61	10.85
General hospitals.....	994.11	.....	.....	799.84	18.41	181.75	.....	.....
Total.....	704.01	510.54	5.40	958.91	7.94	33.14	9.39	13.34
Alaska.....	386.63	332.90	2.62	955.72	7.38	36.90	3.25	8.41
Canal Zone, Panama.....	871.00	481.56	2.37	972.68	2.97	24.36	9.49	10.89
Hawaiian Department.....	568.94	524.61	3.04	964.68	5.54	29.77	7.46	13.11
China.....	1,462.17	1,050.94	4.49	978.83	3.43	17.73	12.77	8.74
Philippine Department.....	990.45	921.93	2.86	951.64	2.95	45.42	10.64	10.74
Army transports.....	572.41	468.75	3.05	976.45	8.57	14.99	14.08	24.60
Army.....	744.59	567.95	4.60	959.67	6.46	33.87	9.44	12.68

INTERNATIONAL TABLE III.—*Movement of sick, by arms of service—Army—Enlisted men, American troops.*

Arms of service.	Mean strength.	Absolute numbers.					Proportionate numbers.				
		Sick ad- missions.		Sick disposed of.			Per 1,000 of mean strength.			Per 1,000 of sick disposed of.	
		Total.	To hos- pital.	Total.	Fit for duty (recov- ered).	Deaths.	Total sick admis- sions.	Ad- mis- sions to hospi- tals.	Deaths.	Fit for duty (recov- ered).	Deaths.
Infantry.....	34,090	26,620	17,503	25,444	24,387	147	780.87	513.44	4.24	958.46	5.78
Cavalry.....	14,408	11,435	8,864	11,305	10,911	73	793.66	615.21	4.99	965.15	6.46
Coast Artillery..	18,963	12,494	11,090	12,230	11,735	79	658.86	584.82	4.10	969.53	6.46
Field Artillery..	5,509	5,313	4,041	5,184	5,007	21	964.42	733.53	3.76	965.86	4.05
Engineers.....	1,877	1,532	1,118	1,518	1,447	11	816.20	595.63	5.77	953.22	7.25
Ordnance.....	725	380	346	372	359	8	524.14	477.24	10.85	965.00	21.51
Signal Corps....	1,364	745	553	727	701	9	546.19	405.43	6.49	964.23	12.38
Hospital Corps..	3,891	2,418	2,129	2,376	2,267	13	621.43	547.16	3.29	954.23	5.47
Others.....	12,435	8,505	7,324	8,389	8,007	75	683.96	588.98	5.94	954.46	8.94
Total.....	93,262	69,442	52,968	67,545	64,821	436	744.59	567.95	4.60	959.68	6.45

INTERNATIONAL TABLE IV.—*Movement of sick, by months (enlisted men).*
AMERICAN TROOPS AT HOME.

Month.	Absolute numbers.						Proportionate numbers.				
	Mean strength.	Sick admissions.		Sick disposed of.			Per 1,000 of mean strength.			Per 1,000 sick disposed of.	
		Total.	To hospital.	Total.	Fit for duty (recovered).	Deaths.	Total sick admissions.	Admissions to hospital.	Deaths.	Fit for duty (recovered).	Deaths.
January...	65,805	4,064	3,069	3,780	3,614	24	61.76	46.64	0.36	956.08	6.35
February..	66,868	4,346	3,308	4,165	4,002	35	64.99	49.47	.52	960.86	8.40
March.....	65,989	4,760	3,540	4,545	4,368	34	72.13	53.65	.52	961.06	7.43
April.....	64,948	4,038	2,878	4,120	3,930	28	62.17	44.31	.43	953.88	6.80
May.....	63,583	3,406	2,425	3,572	3,427	18	53.57	38.14	.28	959.41	5.04
June.....	63,216	3,144	2,188	3,165	3,025	23	49.73	34.61	.36	955.77	7.27
July.....	62,574	3,448	2,379	3,362	3,240	23	55.10	38.02	.36	963.71	6.84
August....	60,875	3,231	2,338	3,179	3,047	44	53.08	38.41	.69	958.48	12.84
September.	62,411	3,356	2,444	3,224	3,080	25	53.77	39.16	.39	955.34	7.75
October...	61,750	3,289	2,320	3,266	3,118	34	53.26	37.57	.54	954.68	10.41
November.	62,726	3,620	2,650	3,353	3,196	27	57.71	42.25	.42	953.18	8.06
December..	63,951	4,161	2,996	4,199	4,078	34	65.07	46.83	.53	971.18	8.10
Total.	63,725	44,863	32,534	43,930	42,125	349	704.01	510.54	5.40	958.91	7.94

AMERICAN TROOPS IN THE PHILIPPINE ISLANDS.

January...	11,519	1,092	964	919	883	2	86.98	83.68	0.17	960.83	2.13
February..	12,097	829	786	856	825	3	68.52	64.97	.24	963.79	2.50
March.....	12,626	909	862	872	836	2	71.99	68.27	.16	958.72	2.29
April.....	13,310	1,133	1,011	1,072	1,011	5	85.12	75.96	.39	943.10	4.66
May.....	12,864	1,084	1,055	1,018	967	2	84.26	82.01	.15	949.90	1.96
June.....	12,566	1,058	1,003	1,059	1,005	3	84.19	79.82	.23	949.01	2.53
July.....	12,464	1,454	1,306	1,438	1,349	2	116.65	104.78	.16	938.11	1.39
August....	11,990	1,348	1,178	1,338	1,263	6	112.43	98.25	.49	943.95	4.43
September.	11,153	991	950	1,016	960	2	88.85	85.18	.18	944.88	1.97
October...	10,769	757	721	867	833	2	70.29	66.95	.19	960.78	2.31
November.	10,747	610	567	553	534	2	56.76	52.76	.20	965.64	2.62
December..	9,896	546	507	530	514	3	55.17	51.23	.30	969.81	5.66
Total.	11,834	11,721	10,910	11,538	10,980	34	990.45	921.93	2.86	951.64	2.95

INTERNATIONAL TABLE V.—*Movement of sick in the larger garrisons, officers and enlisted men, year 1915.*

Garrison.	Mean strength.	Total admissions.		Admissions to hospital.		Deaths.	
		Absolute numbers.	Per 1,000 of mean strength.	Absolute numbers.	Per 1,000 of mean strength.	Absolute numbers.	Per 1,000 of mean strength.
Jefferson Barracks, Mo.....	1,413	1,153	815.99	1,136	803.96	21	14.86
Fort Monroe, Va.....	1,352	994	735.21	899	664.94	4	2.96
Fort Sam Houston, Tex.....	1,293	1,027	794.28	987	763.34	15	11.60
Fort Slocum, N. Y.....	1,287	1,726	1,341.10	1,678	1,303.81	7	5.44
Fort Sill, Okla.....	1,182	953	806.26	838	708.97	8	6.77
Columbus Barracks, Ohio.....	1,166	1,312	1,125.21	1,295	1,110.63	16	13.72
Fort Oglethorpe, Ga.....	1,098	896	816.03	753	685.80	3	2.73
Fort Winfield Scott, Cal.....	1,098	363	330.60	250	227.69	4	3.64
Presidio of San Francisco, Cal..	1,092	770	705.13	547	500.92	.....	.....
Vancouver Barracks, Wash.....	958	591	616.91	555	579.33	2	2.09
Fort Huachuca, Ariz.....	875	285	325.71	245	280.00	10	11.43
Fort McDowell, Cal.....	871	754	866.69	663	761.20	1	1.15
Fort Ethan Allen, Vt.....	869	726	835.44	672	773.30	5	5.75
West Point, N. Y.....	838	288	343.68	249	297.14	2	2.39
Fort Bliss, Tex.....	823	655	795.87	630	765.49	14	17.01
Fort Leavenworth, Kans.....	811	755	930.95	443	546.24	1	1.23
Plattsburg Barracks, N. Y.....	766	527	687.99	442	577.02	3	3.92
Fort Hancock, N. J.....	750	442	589.33	411	548.00	3	4.00
Fort Myer, Va.....	694	611	880.40	545	785.30	1	1.44
Fort H. G. Wright, N. Y.....	683	577	844.80	532	778.91	.....	.....
Fort Terry, N. Y.....	681	456	669.60	350	513.95	2	2.94
Madison Barracks, N. Y.....	641	359	560.06	352	549.14	2	3.12
Fort Barrancas, Fla.....	637	293	459.97	267	419.15	2	3.14
Fort Worden, Wash.....	633	319	503.96	280	442.34	.....	.....
Fort Hamilton, N. Y.....	629	245	389.51	218	346.58	3	4.77
Fort Gibbon, Alaska.....	234	96	410.26	76	324.79	1	4.27
Fort Wm. H. Seward, Alaska..	214	96	448.60	85	397.20	.....	.....
Fort Davis, Alaska.....	107	34	317.76	34	317.76	.....	.....
Schofield Barracks, Hawaii.....	5,349	3,146	588.15	2,899	541.97	13	2.43
Fort Shafter, Hawaii.....	1,944	1,033	531.38	983	505.66	1	.51
Fort Kamehameha, Hawaii.....	444	297	668.92	160	360.36	3	6.76
Fort Ruger, Hawaii.....	287	134	466.90	109	379.79	.....	.....
Fort De Russy, Hawaii.....	204	93	455.88	60	294.11	.....	.....
Fort Mills, P. I.....	4,679	2,911	622.14	2,754	588.59	6	1.28
Fort William McKinley, P. I...	3,008	2,849	947.14	2,708	900.27	10	3.32
Camp Stotsenburg, P. I.....	2,030	2,628	1,294.58	2,487	1,225.12	4	1.97
Ludlow Barracks, P. I.....	909	549	603.96	537	590.76	.....	.....
Cuartel de Espana, P. I.....	899	1,346	1,497.22	958	1,065.63	2	2.22
Augur Barracks, P. I.....	836	610	729.67	565	675.84	2	2.39
Camp McGrath, P. I.....	726	675	929.75	639	880.17	1	1.38
Camp Keithley, P. I.....	646	317	490.71	301	465.94	1	1.55
Camp John Hay, P. I.....	533	462	866.79	447	838.65	4	7.50
Camp Eldridge, P. I.....	524	517	986.64	471	898.86	3	5.73
Pettit Barracks, P. I.....	477	198	415.09	188	394.13	3	6.29
Warwick Barracks, P. I.....	462	235	508.66	216	467.54	1	2.16
Camp Overton, P. I.....	436	210	481.66	189	433.49	3	6.88
Fort San Pedro, P. I.....	337	304	902.08	282	836.80	2	5.93
Camp Gregg, P. I.....	314	280	891.72	259	824.84	1	3.18

35. Morbi cutis¹	40	1,927	1,967	1,908	.....	24	1,932	36	20,220	20.66	.....	987.58	.....	12.42	10.49
36. Morbi mentis.....	92	358	450	44	.....	334	383	84	30,546	3.82	.05	114.88	.....	872.06	85.32
37. Morbi oculi.....	28	940	968	911	5	34	945	27	11,686	10.08	.....	964.02	.....	35.98	12.43
38. Morbi systemat. urin. et sexual. (excluding venerie et syphilis).....	35	927	962	823	16	81	920	44	18,092	9.94	.17	894.57	17.39	88.04	19.52

¹ Includes tuberculosis of the larynx.

² Includes pericarditis and endocarditis.

³ Diseases of the skin proper.

	3	4							.09	.28								
29. Typhus abdominalis...																		
30. Typhus exanthematicus	1,252	267	282	180	38	4	15	34	134	36.73	18.63	14.87	29.04	20.26	5.62	11.00	8.74	10.78
31. Ulcus molle	1	1	1	1						.05	.07	.05	.18					
32. Variola	262	67	115	41	19		11	29	80	7.88	4.85	6.06	7.44	10.12		8.06	7.46	6.43
33.	49	12	27	12	1			5	13	1.44	.90	1.42	2.18	53		.73	1.20	1.05
34.	734	323	435	119	47	4	11	38	216	21.53	22.42	22.94	21.60	25.04	5.52	8.06	9.77	17.37
35.	151	46	77	17	6		3	16	42	4.43	3.19	4.05	3.09	3.20		2.20	4.11	3.38
36.	385	141	196	52	23	6	8	23	93	11.32	9.79	10.44	9.44	17.59	8.28	5.87	5.91	7.43
37.																		
38.	311	162	148	65	24	6	13	44	154	9.12	11.24	7.30	11.80	12.79	8.28	9.53	11.31	12.33

* Includes tuberculous of the larynx.

* Includes pericarditis and endocarditis.

* Diseases of the skin proper only.

INTERNATIONAL TABLE VIII.—Most important diseases, by months (enlisted men), 1915.

Diseases of the international nosological table.	Admissions by months.											
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1. Alkoholismus acutus, including delirium tremens.	101	110	87	99	75	88	122	97	98	84	109	130.
2. Appendicitis, typhilitis, and perityphilitis.	62	67	86	75	74	90	72	55	63	55	63	53.
3. Bronchitis acuta.	397	346	404	262	183	182	168	176	187	198	274	390
4. Cholera Asiatica.												
5. Cholera nostras.												
6. Diphtheria et croup.	6	2	12	4	2	3		1	1	2		26
7. Dysenteria.	7	9	12	13	18	19	9	21	21	17	23	14
8. Erysipelas.	3	3	2		4	1	2	1	2	1	2	2
9. Febris intermittens (malaria).	92	65	98	164	215	210	136	111	97	110	78	60
10. Febris recurrens.												
11. Fractura ossium.	85	92	95	111	119	91	109	111	86	96	108	103
12. Gonorrhoea.	541	417	519	474	527	442	443	478	528	540	491	467
13. Hernia.	24	28	33	34	30	30	33	21	34	30	31	25
14. Influenza.	222	474	502	283	138	127	111	73	69	111	284	802
15. Insolatio (Hitzschlag, coup de chaleur).			1		1	3	2					
16. Luxationes articularum.	25	20	14	21	21	28	19	27	17	12	26	19
17. Meningitis cerebrospinalis epidemica.	6	4	3	6	3	2						2
18. Morbilli.	130	135	141	108	50	10	3	4	11	6	14	21
19. Parotitis epidemica.	106	202	301	201	96	32	5	6	1	1	3	4
20. Pleuritis.	14	21	28	27	28	20	25	23	15	20	16	22
21. Pneumonia crouposa sive lobaris.	25	31	44	28	7	16	8	5	4	10	11	36
22. Rheumatismus articularum.	61	52	73	67	62	41	36	23	31	28	36	32
23. Scarlatina.	15	6	5	8	6	4	3		1			2
24. Scorbutus.												
25. Syphilis.	220	166	167	198	174	152	154	147	137	160	159	159
26. Trachoma.	1	1	4	3	1	1	1	1		1		1
27. Tuberculosis pulmonum ¹ .	23	17	36	16	22	22	32	37	25	26	29	14
28. Tuberculosis ceterorum organorum.	4		4	4	2		3	4	2	2	2	2
29. Typhus abdominalis.							1	1		3	2	
30. Typhus exanthematicus.												
31. Typhus molle.	247	192	168	188	170	164	175	182	165	171	175	189
32. Variola.		1	1				1			1		
33. Morbi auris.	57	45	83	56	55	55	55	70	40	37	36	35
34. Morbi cordis.	6	7	8	15	15	13	9	10	9	10	12	7
35. Morbi cutis.	154	103	120	168	165	179	213	179	185	184	145	122
36. Morbi mentis.	3	40	51	27	19	26	26	21	28	31	26	26
37. Morbi oculi.	67	86	97	83	76	82	84	76	61	88	82	58
38. Morbi systemat. urin. et sexual. (excluding venerie et syphilis).	7	71	86	82	67	82	79	76	74	81	88	64

¹ Includes tuberculosis of the larynx.

² Includes pericarditis and endocarditis.

³ Diseases of the skin proper only.

INTERNATIONAL TABLE IX.—Deaths by rank, by length of service and by age, 1915.

Causes of death.	Total number of deaths (enlisted men).		Deaths by rank and length of service.				Deaths by age.					
	Absolute numbers.	Per 1,000 of mean strength.	Noncommissioned officers.	Soldiers in first year of service.	Soldiers in second year of service.	Soldiers in third year of service and over.	20 and under.	21 to 25.	26 to 30.	31 to 35.	36 to 40.	40 and over.
Deaths from sickness.....	246	2.60	50	73	36	78	19	81	42	36	27	41
Soldiers present with troops.....	147	1.55	28	53	22	44	14	57	25	18	13	20
Soldiers absent from troops.....	99	1.05	31	20	14	34	5	24	17	18	14	21
Accidental deaths.....	140	1.48	19	26	25	70	10	62	29	20	11	8
Soldiers present with troops.....	95	1.00	14	20	21	40	8	43	19	14	7	4
Soldiers absent from troops.....	45	.48	5	6	4	30	2	19	10	6	4	4
Suicides.....	50	.53	13	8	6	23	.....	15	12	9	7	7
Soldiers present with troops.....	38	.40	12	5	5	16	.....	10	9	6	7	6
Soldiers absent from troops.....	12	.13	1	3	1	7	.....	5	3	3	.....	1
Total.....	436	4.60	91	107	67	171	29	158	83	65	45	56

INTERNATIONAL TABLE X.—Discharges from the Army for physical disability, temporary or permanent, by rank, length of service, and by age, 1915.

Causes of discharge.	Total discharges (enlisted men.)		Rank and length of service.				Age.					
	Absolute numbers.	Per 1,000 of mean strength.	Noncommissioned officers.	Soldiers in first year of service.	Soldiers in second year of service.	Soldiers in third year of service and over.	20 and under.	21 to 25.	26 to 30.	31 to 35.	36 to 40.	40 and over.
Physical disability existent prior to enlistment.....	761	8.03	9	522	153	77	98	452	149	52	8	2
Physical disability incident to service.....	471	4.97	54	102	80	235	33	192	119	62	28	37
Physical disability not incident to service.....	119	1.26	11	28	26	54	4	42	26	23	14	10
Total.....	1,351	14.26	74	652	259	366	135	686	294	137	50	49

Very respectfully,

H. P. BIRMINGHAM,
Colonel, Medical Corps,
Acting Surgeon General.

The SECRETARY OF WAR.

REPORT OF THE CHIEF OF ORDNANCE.

REPORT OF THE CHIEF OF ORDNANCE.

WAR DEPARTMENT,
OFFICE OF THE CHIEF OF ORDNANCE,
October 1, 1916.

SIR: I have the honor to submit the following report on the principal operations of the Ordnance Department during the past fiscal year, together with certain remarks as to its interests and necessities:

PERSONNEL.

The department has not suffered from abnormal losses of officers since the date of my last annual report, but it is still embarrassed by the losses which occurred previously and which were mentioned in that report. Congress has, in the national defense act of June 3, taken action for the relief of the department in the matter of officers by providing for an increase of 57, in the previously established force of 85. The increase is to take place in installments over five years, which is probably at as rapid a rate as the officers can be instructed for duty as Ordnance officers and assimilated. The act has in addition provided for the detail of 30 line officers for a preliminary course of instruction looking to their eventual regular detail in the Ordnance Department, with the object of affording personnel for the authorized increment of the department and for making good normal casualties. The provisions made by Congress ought to be satisfactory and doubtless will ultimately be so. In the meantime, while new officers are receiving the special training necessary to make them useful Ordnance officers, the department will have to do its best with its existing trained personnel and with such assistance as it can command from sources outside of it. Assistance of this latter class has been made available in the matter of production by experience of many American establishments in the manufacture of war matériel for European nations, but in the matter of design there is less trained ability to draw upon, and until training in design shall have produced additions to the present available number of competent designers the department will have to get along as best it can, with the assistance of such designs as have been evolved in Europe and can be secured, probably at considerable expense. The best possible is being done to meet the situation which there is no quick way of covering satisfactorily.

Of the 30 officers allowed for instruction, contemplating their later detail in the department, effort has been made to secure 15 this year, but because of other demands for the services of officers of proper age and condition it has been possible to get only 8. These 8 have been ordered to the Sandy Hook Proving Ground for a year's course in the

theoretical engineering work of ordnance construction. The second year's course will be entirely practical.

The conditions along the Mexican border have called for the establishment of some half dozen depots for the supply of troops with ordnance matériel. These depots have called for supply officers from the Ordnance Department, who have been furnished from the department's existing personnel. This requirement has made a draft upon the officers available for designing, manufacturing, and inspecting work; but it is a necessity which must at any time be expected and which the organization should provide for. Thus far it has been met without the increase of the Ordnance Department by any members outside of its organization, but it is obvious that it can not be carried much further without such increase.

New systems of supply and accountability of regiments and of the collection of troops at posts have devolved upon regimental and post ordnance officers an increased amount of work, and to meet this the enlisted force of the Ordnance Department has been increased so as to provide the proper assistance to these officers, and avoid the depletion of line organizations by the detail of men for this kind of work. These enlisted men will form part of the force of post ordnance officers when in garrison, but will be attached to and go with the regiments to which they belong when these regiments take the field.

FISCAL AFFAIRS.

The statement giving the receipts and expenditures of the Ordnance Department under general headings for the fiscal year of 1916 is herewith submitted in tabular form so as to show the data under the various appropriations made for the service of this department, including those for experiments conducted under the direction of the Board of Ordnance and Fortification and for the purchase of submarine mines, the control of which rests with the Chief of Coast Artillery.

The tables constituting the statement show that on July 1, 1915, there was in the Treasury and in the possession of disbursing officers the sum of \$18,500,774.13.

Statement of receipts and expenditures of appropriations under control of the Ordnance Department for the fiscal year ended June 30, 1916.

RECEIPTS.

Appropriations.	Balance in the Treasury on June 30, 1915.	Amount in the Treasury not reported to the credit of the appropriation on June 30, 1915.	Balance to the credit of disbursing officers on June 30, 1915.	Appropriated, etc.	Received from transfers during the fiscal year 1916.	Received from sales, loss, damage, etc., during the fiscal year 1916.	Total.
Ordnance services:							
1914.....	\$732.16		\$6.24				\$738.40
1915.....	9,121.29	\$737.21	34,752.95		\$164.32	\$26.30	44,792.07
1916.....				\$345,000.00	685.66	1,705.79	347,391.45
Ordnance stores, ammunition:							
1913 and 1914.....	476.15						476.15
1914 and 1915.....	8,942.94		3,922.51				12,865.45
1915 and 1916.....	51,721.00		17,983.38				69,704.38
1916 and 1917.....				100,000.00			100,000.00
Ordnance stores and supplies:							
1913 and 1914.....	660.46		22.61				683.07
1914 and 1915.....	4,674.89		4,514.17				9,188.97
1915 and 1916.....	105,123.82	107.34	81,981.02		858.97		188,071.15
1916 and 1917.....				1,644,000.00	.50	18.00	1,644,018.50
Small-arms target practice:							
1913 and 1914.....	1,808.68		4,180.82				5,989.50
1914 and 1915.....	98,446.92	.42	19,972.47				118,419.81
1915 and 1916.....	102,436.77	381.71	108,154.70		48.54		211,021.72
1916 and 1917.....				800,000.00	611.74	22.20	800,633.94
Repairs of armaments:							
1914.....	516.10		7,527.25				8,043.35
1915.....	83,860.81	579.90	57,704.90			2.36	142,147.97
1916.....				290,000.00		9.07	290,009.07
Replacing ordnance and ordnance stores:							
1913 and 1914.....	560.66	66.35	122.72				749.73
1914 and 1915.....	27,206.25	327.05	79,962.01		64.06		107,559.37
1915 and 1916.....	690,641.30	22,754.20	72,164.75		2,228.02	64,542.37	852,330.64
1916 and 1917.....					1,997.54	463,598.19	465,595.73
Manufacture of arms:							
1913 and 1914.....	753.33		90.83				844.16
1914 and 1915.....	2,339.90	67.10	3,261.95				5,668.95
1915 and 1916.....	150,706.27	701.15	49,637.89		31.88	13.95	201,091.14
1916 and 1917.....				256,000.00	1,566.33	54.86	257,621.19
Automatic rifles.....	44,421.50						44,421.50
1916 and 1917.....				150,000.00			150,000.00
Exchanging or issuing new pistols, ammunition, etc., Organized Militia.....	5,453.02		1,892.39				7,345.41

REPORT OF THE CHIEF OF ORDNANCE.

RECEIPTS—Continued.

Appropriations.	Balance in the Treasury on June 30, 1915.	Amount in the Treasury not reported to the credit of the appropriation on June 30, 1915.	Balance to the credit of disbursing officers on June 30, 1915.	Appropriated, etc.	Received from transfers during the fiscal year 1916.	Received from sales, loss, damage, etc., during the fiscal year 1916.	Total.
Field artillery for Organized Militia							
1913 and 1914	\$201,166.72		\$907.89				\$202,074.61
1913-1915	896.41						896.41
1913-1915	53,238.29	\$1,063.42	23,900.17				78,801.88
1914-1916	1,338,559.56	154.81	41,103.66				1,399,718.03
1915-1917	2,019,187.63		10,519.40				2,089,707.03
Ammunition for field artillery for Organized Militia:							
1913-1915					\$120.96		
1914-1916	671,496.45	103.15	93.70			\$1.44	214.66
1915-1917	2,766,530.00		169,888.30			29,255.84	841,489.34
Equipment of Coast Artillery armories, Organized Militia	23,720.15	146.21	92,975.77	\$22,958.32		65.99	2,888,761.61
Encampment and maneuvers, Organized Militia, act of July 8, 1912	8,961.20		9,469.37				56,360.04
1913-1915	3,701.56		53.65				9,014.85
1914-1916	31,297.81						3,701.56
1915-1917	514.88			20,562.00			51,859.81
Replacing and repairing ordnance property at Gulf forts	10,690.41			5,819.60			6,364.48
Armored motor cars, 1916					1,852.82	34.40	12,577.67
Testing machines:				50,000.00			50,000.00
1912			.60				.60
1914	47.11						47.11
1915	500.00	55.06	2,132.50				2,687.56
1916				15,000.00	96.25	691.00	15,787.85
Fire control at fortifications	124,716.05	97.85	18,744.23	5,113.86			148,671.99
Fire control in insular possessions	37,385.50		2,374.76	21,928.00			61,688.26
Submarine mines	471,818.06		21,074.54		14,001.22	453.59	507,350.41
Submarine mines in insular possessions	52,586.51	10.00	5,710.85		10.00		58,347.36
Fortifications in insular possessions	735,957.13	317.42	210,382.51		1,069.94		977,727.00
Armament of fortifications	4,741,949.46	4,010.41	578,006.48		1,009.49	1,076.03	5,326,051.87
Augusta Arsenal, Augusta, Ga., 1915			3,272.36				3,272.36
Benicia Arsenal, Benicia, Cal.			275.48				275.48
1915			6,588.36				6,588.36
1916				10,000.00			10,000.00
Frankford Arsenal, Philadelphia, Pa.	19,000.00		644.88	100,500.00			120,144.88
1914			302.57				302.57
1916	3.96		5.17				5.17
1916				15,000.00			15,000.00

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REPORT OF THE CHIEF OF ORDNANCE.

DISBURSEMENTS.

Appropriations.	DISBURSEMENTS.							Total.
	Disburse- ments at the arsenals, Ord- nance Office, etc.	Paid and transferred on "treasury settlement," etc., during the fiscal year 1916.	Deposited in the Treasury as proceeds of sales and miscel- laneous receipts.	Covered into the surplus fund of the Treasury on June 30, 1916.	Balance to the credit of the disbursing officers on June 30, 1916.	Amount in the Treasury not re- ported to the credit of the appro- priation on June 30, 1916.	Balance in the Treasury on June 30, 1916.	
Ordnance service:								
1914.....	.....	\$88.29	.....	\$650.11	.....	.....	.....	\$738.40
1915.....	\$42,925.94	1,465.09	.....	.....	\$2.94	.....	\$398.10	44,792.07
1916.....	276,985.49	5,455.53	.....	.....	41,579.84	\$144.21	23,226.38	347,391.45
Ordnance stores, ammunition:								
1913 and 1914.....	.....	.....	.....	476.16	.....	.....	.....	476.16
1914 and 1915.....	12,722.51	.....	.....	.....	.....	.....	142.94	12,865.45
1915 and 1916.....	54,744.80	.27	.....	.....	9,322.36	.....	5,636.95	69,704.38
1916 and 1917.....	51,083.20	.....	.....	.....	6,129.01	.....	42,787.79	100,000.00
Ordnance stores and supplies:								
1913 and 1914.....	22.61	93.24	.....	567.22	.....	.....	.....	683.07
1914 and 1915.....	8,417.93	77.60	.....	.....	7.90	.....	685.54	9,188.97
1915 and 1916.....	132,191.05	275.73	.....	.....	54,438.11	.....	1,166.26	188,071.15
1916 and 1917.....	772,167.85	286.58	.....	.....	101,414.49	.....	770,149.58	1,644,018.50
Small-arms target practices:								
1913 and 1914.....	4,040.53	105.82	.....	1,758.68	84.47	.....	.....	5,989.50
1914 and 1915.....	96,316.01	.....	.....	.....	21,380.00	.....	728.80	118,419.81
1915 and 1916.....	153,438.50	353.27	.....	.....	8,394.73	.....	48,835.22	211,021.72
1916 and 1917.....	404,906.22	122.55	.....	.....	52,526.20	.....	343,078.97	800,633.94
Repairs of arsenals:								
1914.....	7,115.93	285.62	.....	242.66	399.14	.....	.....	8,043.35
1915.....	120,184.14	3.36	.....	.....	21,312.40	.....	648.07	142,147.97
1916.....	178,780.86	1,037.43	.....	.....	55,403.66	52.00	54,735.12	290,009.07
Replacing ordnance and ordnance stores:								
1913 and 1914.....	111.26	466.92	.....	171.55	.....	.....	.....	749.73
1914 and 1915.....	107,324.92	146.49	.....	.....	10.05	.....	77.91	107,559.37
1915 and 1916.....	527,660.16	3,648.68	.....	.....	101,893.76	.....	219,728.04	852,330.64
1916 and 1917.....	44,899.40	67.47	.....	.....	47,036.79	4,862.18	368,739.89	465,595.73
Manufacture of arms:								
1913 and 1914.....	.....	.....	.....	844.16	.....	.....	.....	844.16
1914 and 1915.....	5,200.39	60.00	.....	.....	.....	.....	358.56	5,668.95

1913 and 1914.....	199,310.02	851.18	16,259.49	.....	369.83	201,001.14
1915 and 1917.....	77,047.90	820.34	49,833.16	.....	134,920.79	267,021.19
Automatic rifles.....	3,793.42	.....	3,075.00	.....	38,236.88	44,421.80
1916 and 1917.....	26,022.02	56.96	3,022.94	.....	120,344.04	160,000.00
Exchanging or issuing new rifles and machine guns, organized Militia.....	2,400.64	.....	.....	.....	44.77	7,345.41
Field artillery for Organized Militia.....	2,835.73	553.46	.....	.....	196,665.43	202,074.61
1913 and 1914.....	28,340.20	155.56	42,238.31	.....	8,077.91	78,801.88
1915-1917.....	1,201,100.15	1,104.83	12,043.77	.....	22,449.24	1,309,718.08
1914-1916.....	232,968.10	16,302.80	93,214.33	.....	1,747,104.50	2,099,707.03
1915-1917.....	93.70	.....	.....	.....	.....	.....
Ammunition for field artillery for Organized Militia:						
1913-1915.....	794,733.90	150.77	53,767.70	.....	120.96	214.66
1914-1916.....	1,353,919.27	16.00	157,371.36	.....	1,377,654.94	841,490.34
1915-1917.....	12,123.16	21.26	1,354.51	.....	42,822.12	66,360.04
Equipment of coast artillery armories, Organized Militia.....	190.79	.....	38.29	.....	8,785.83	9,014.86
Encampment and maneuvers, Organized Militia:						
1913-1915.....	3,701.66	.....	1,500.00	.....	.....	3,701.66
1914-1916.....	50,349.81	4,715.75	.....	.....	948.79	51,859.81
1915-1917.....	700.00	.....	.....	.....	.....	6,364.48
Replacing and repairing ordnance property at Gulf forts.....	1,997.26	10,000.41	.....	.....	.....	12,677.67
Armored motor cars, 1916.....	44,272.29	16.04	2,303.18	.....	3,508.73	50,000.00
Testing machines:						
1912.....	.....	.....	.....	.....	.....	60
1914.....	2,591.96	47.11	96.00	.....	.....	47.11
1915.....	12,494.39	6.66	441.18	.....	2,846.25	2,497.56
1916.....	28,353.32	.....	1,409.29	.....	123,847.39	16,787.85
1917.....	13,109.16	.....	4,120.90	.....	44,458.20	148,671.99
.....	96,243.54	1,448.99	29,672.40	.....	379,683.48	61,048.26
.....	11,505.29	.....	41,026.63	.....	5,215.46	507,350.41
.....	879,006.15	44,371.70	83,186.37	.....	268,502.78	59,347.36
.....	2,131,936.33	14,069.62	565,294.37	.....	2,601,182.00	877,727.00
.....	3,190.86	13,531.81	.....	.....	76.04	5,236,061.67
.....	139.25	.....	80.43	.....	81.50	3,272.36
.....	6,567.81	.....	.....	.....	.....	276.49
.....	9,943.85	.....	80.15	.....	.....	6,688.36
.....	97,977.59	.....	2,874.71	.....	19,242.59	10,000.00
.....	302.67	.....	.....	.....	.....	120,144.66
.....	5.17	.....	.....	.....	.....	304.55
.....	2,205.24	.....	12,794.78	.....	.....	5.17
.....	19,550.00	.....	.....	.....	.....	16,000.00
.....	101,000.26	1,728.08	.....	.....	.....	19,650.00
.....	67.23	24,832.67	.....	.....	1,061.36	1,430.19
.....	1,183.40	.....	.....	.....	10,554.67	126,859.65
.....	341.03	.....	1,472.78	.....	.....	26,000.00
.....	6,199.12	.....	1,951.14	.....	.....	2,611.13
.....	81,071.35	21.04	24,306.71	.....	.....	2,292.17
.....	.....	.....	.....	.....	.....	5,199.31
.....	.....	.....	.....	.....	.....	85,531.17
.....	7,632.80	.....	.....	.....	.....	7,632.80
.....	20,324.46	.....	8,800.43	.....	.....	36,174.91

The total amount of the appropriations and allotments for the fiscal year 1916 was \$25,508,348.03. The total amounts with which the appropriations were credited in accordance with law from sales, transfers, etc., was \$638,172.69. The total payments made by disbursing officers and by Treasury settlements during the year amounted to \$12,766,698.57. The total sales of condemned stores during the year amounted to \$112,355.35, all of which was credited on the books of the Treasury Department to "Ordnance material (proceeds of sales)." The total sales to other parties covered into the Treasury Department to the credit of the fund "Miscellaneous receipts" amounted to \$14,648.38. The total amount to the credit of disbursing officers on June 30, 1916, was \$2,092,353.53, and the total amount in the Treasury on the same date was \$10,345,012.04. (See note, p. 11.)

FUNDS ON HAND AT THE BEGINNING AND CLOSE OF THE FISCAL YEAR.

The principal amounts on hand at the beginning of the year pertained to the following appropriations:

Field artillery for Organized Militia, 1914-1916-----	\$1, 390, 718. 03
Field artillery for Organized Militia, 1915-1917-----	2, 089, 707. 03
Ammunition for field artillery for Organized Militia, 1915-1917--	2, 859, 505. 77
Fortifications in insular possessions-----	976, 657. 06
Armament of fortifications-----	5, 323, 966. 35

The status of these appropriations at the close of the fiscal year will be seen by reference to the tabular statement.

The principal amounts on hand at the close of the fiscal year pertained to the following appropriations:

Ordnance stores and supplies, 1916 and 1917-----	\$871, 564. 07
Field artillery for Organized Militia, 1915-1917-----	1, 840, 379. 13
Ammunition for field artillery for Organized Militia, 1915-1917--	1, 534, 826. 34
Arming and equipping the Militia-----	438, 895. 11
Armament of fortifications-----	3, 166, 512. 41

The balances under the appropriations "Field artillery for Organized Militia, 1915-1917" and "Ammunition for field artillery for Organized Militia, 1915-1917" are available for the fiscal year 1917.

Of the above amounts reported on hand at the close of the fiscal year the greater portion in nearly every case had been allotted to meet outstanding obligations. The available balances under the above-named appropriations at the close of the fiscal year are as follows:

Ordnance stores and supplies, 1916 and 1917-----	\$44, 218. 30
Field artillery for Organized Militia, 1915-1917-----	60, 930. 95
Ammunition for field artillery for Organized Militia, 1915-1917--	185, 733. 71
Arming and equipping the Militia-----	24, 521. 01
Armament of fortifications-----	371, 783. 46

TRANSFERS AND SALES OF SERVICEABLE ORDNANCE STORES.

The value of ordnance stores transferred to the executive departments and the Organized Militia during the last fiscal year, for which settlement was made directly or by Treasury settlement, amounted to \$414,372.84. Of this amount \$229,393.43 was on account of transfers to the Navy Department; \$111,177.36 on account of transfers to the Marine Corps; \$66,581.45 on account of transfers to other executive departments; and \$7,220.60 on account of transfers to the Organized Militia.

The practice of advancing militia funds to this department directly at the beginning of the year, so that the procurement of the stores required may be inaugurated, mentioned in previous reports, has worked satisfactorily and is being continued. A similar practice is also followed in connection with Navy funds.

In other cases settlement is made directly or by Treasury settlement, the money received being taken up in the fund "Replacing ordnance and ordnance stores," and remaining available during the year in which the corresponding stores were transferred and the following year.

The total transfers and sales amounted to \$765,176.92.

PAYMENTS.

The total payments made by disbursing officers amounted to \$12,505,066.60, and by Treasury settlements to \$261,631.97; a total of \$12,766,698.57.

The amounts of disbursements made at the principal arsenals and in the Ordnance Office during the fiscal year are as follows:

Frankford Arsenal	\$3, 799, 135. 09
Rock Island Arsenal	3, 416, 428. 60
Springfield Armory	683, 036. 78
Picatinny Arsenal	775, 291. 22
Watervliet Arsenal	741, 675. 23
Ordnance Office	1, 101, 184. 63

AMOUNTS COVERED INTO THE SURPLUS FUND.

The principal amounts covered into the surplus fund of the Treasury were:

Small-arms target practice, 1913 and 1914	\$1, 753. 68
Manufacture of arms, 1913 and 1914	844. 16
Field artillery for Organized Militia, 1913 and 1914	896. 41
Replacing and repairing ordnance property at Gulf forts	10, 690. 41
Armament of fortifications	13, 531. 51

COMPARISON OF THE FISCAL STATEMENT WITH THAT OF THE PRECEDING YEAR.

Comparing the fiscal statement with that of the preceding year it will be found that the amount of appropriations during the year was increased from \$19,125,343.53 to \$25,508,348.03, an increase of \$6,383,004.50. The amount of disbursements decreased from \$14,961,527.47 to \$12,766,698.57. The amount received from transfers to the executive departments and the Organized Militia decreased from \$1,328,292.44 to \$414,372.84. This reduction was caused by the advancing of militia funds to this department and by the placing of Navy funds to the credit of this department on the books of the Treasury, subject to requisition by disbursing officers of this department. The amount available at the close of the fiscal year decreased from \$18,500,774.13 to \$12,437,547.57, a decrease of \$6,063,226.56. Had the fortifications act, referred to on page 11, been approved prior to June 30, 1916, the amount available for disbursement at the close of the fiscal year would have been \$31,855,147.57, an increase of \$13,354,373.44. (See note, p. 11.)

CASH REWARDS FOR EMPLOYEES.

In previous annual reports reference has been made to the passage of an act authorizing the payment of cash rewards for the most

valuable suggestions submitted by employees, and in my last report a table was submitted showing the payments made since the passage of that act. That table is repeated below, including the data for the fiscal year 1916:

	Number of meritorious suggestions.	Total amount paid.	Average for suggestion.
Oct. 1, 1912, to June 30, 1913.....	12	\$148. 46	\$12. 37
July 1, 1913, to June 30, 1914.....	7	169. 36	24. 19
July 1, 1914, to June 30, 1915.....	8	337. 46	42. 18
July 1, 1915, to June 30, 1916.....	24	1,545. 44	64. 19

It will be noted that the total paid and the average amount for each suggestion have increased each year since the law went into effect.

OPERATION OF LIABILITY ACT.

A table of data showing the operation of this act was given in my last annual report. That table is repeated below with data for the fiscal year 1916 added:

Year.	Total injured.	Absent on account of injury.							Amount paid on account of disability.	Total number of employees.
		Total.	0 to 5 days.	5 to 10 days.	10 to 15 days.	15 to 20 days.	20 to 25 days.	25 days and over.		
1909.....	286	236	87	33	13	44	13	46	\$3,714. 70	6,628
1910.....	372	284	78	37	19	47	39	64	11,541. 15	6,037
1911.....	518	326	115	29	12	47	43	80	15,218. 85	5,444
1912.....	612	358	131	29	11	65	43	79	15,865. 99	5,317
1913.....	800	441	178	44	17	64	48	90	18,376. 30	5,306
1914.....	1,518	566	229	75	37	101	34	90	18,631. 92	6,127
1915.....	1,956	630	281	58	26	88	63	114	25,152. 99	7,143
1916.....	1,765	496	228	46	24	77	32	89	27,966. 36	6,242
Total.....	7,827	3,337	1,327	351	159	533	315	652	136,468. 26	.....

Considering only those absent over 15 days, and therefore entitled to payment on account of the injury sustained, it will be noted that the average payment for each injury has varied from year to year, but the tendency is upward, being \$36.06 in 1909, \$84.84 in 1912, \$94.92 in 1915, and \$142.68 in 1916.

A new law embodied in the act approved September 7, 1916, has taken the place of the former law for the compensation of injured employees. It has been too recently enacted for any experience to have been had with its operation, but its provisions give promise of being much fairer both to the employees and to the Government than the previously existing law, under which there was an incentive to extend to at least 15 days the period of disability, since no compensation was allowed for any less period; and there was an incentive not to shorten a period after it had reached 15 days, since full compensation was allowed beyond that time, up to a year. The new act shortens the period of disability necessary for securing pecuniary compensation to 3 days, and makes the compensation such a percentage of the employee's full pay, instead of the full pay itself,

as to furnish an incentive for returning to the full-pay status. In other words, the loss arising from disability is not imposed upon either the Government or the employee entirely, but is divided between them. There are other advantageous features of the new act.

SCIENTIFIC MANAGEMENT.

The Army appropriation act of March 4, 1915, prohibited the making of time studies and the payment of premiums, as far as work done under that act was concerned. This operated to stop time studies, since these were made under the direction of officers who were paid out of the Army act appropriations; but as most of the premiums which had been paid in the department had been paid from funds appropriated in the fortifications act, it had little effect upon these. At its last session, however, Congress placed the restrictive legislation not only upon the Army appropriation bill, but also upon the other supply bills affecting this department, so that time studies and premium payments are now effectively forbidden. A time study is a scientific method for determining the best order and sequence in which a given piece of work should be performed, and for ascertaining the time which it ought reasonably to be expected to take; so as to permit the setting of a fair rate of compensation for the job. The reliability of the method depends upon the degree to which the scientific character which it ought to have is attained. The restrictive legislation interferes with the scientific character of the method, by prohibiting the division of a job into component parts for separate timing, but it does not abolish the method altogether, and a less perfect method of rate setting than the time study is therefore still possible.

A premium is a means of payment of a workman for output, with an assured minimum of his regular wage. The employment of this means has been prohibited, but the Comptroller of the Treasury has decided that the piecework method of payment for output, which makes the compensation correspond with the production, but without an assured minimum, is not prohibited, and is therefore still available. Piecework has prevailed to a large extent in the Ordnance Department for many years, and is still pursued. At the Watertown Arsenal, where there is not much repetition work, there has heretofore been little piecework, and the compensation for output has been in the form of premiums, which are now forbidden. With the assistance of such time studies as have been made in the past it will be possible to carry on a good deal of this work under the piecework system, and this possibility is under study. In the meantime premiums have ceased, to the expressed dissatisfaction of a number of the employees. If a good method of rate setting is available it does not make much difference whether the stimulus to extra earnings is afforded by the piecework, the premium, the bonus, or any other system of payment; and if such stimulus is to be avoided, and payment made altogether irrespective of the output, it must be by the prohibition altogether of payment for output.

LEAVES OF ABSENCE.

The naval appropriation act approved August 29 last extends the leave period of 15 days with pay, theretofore granted, to 30 days for

the employees of this department. In addition to the statutory leave thus granted, the employees receive pay each year, without work, for 7 legal holidays and for about 11 Saturday afternoons during the summer season. Therefore, under the new act they will receive pay for some 42½ days per year without work. Under the rule of paying the same daily wage as that of the vicinity for work of like character a Government employee will, therefore, receive about 16 per cent more pay for the time actually worked than a private employee doing work of like character in 8-hour days, since the private employee is paid only for the time actually worked. If the hours of work of the private employee are 9 hours per day, the Government employee will receive in compensation 30 per cent more pay for the time worked. The difference makes a very considerable handicap in the labor cost of the Government work, and affords some measure of what must be overcome in order to meet the contention that a better output, resulting from diminished hours of labor and increased holidays, is sufficient to offset the handicap.

EXAMINATION AND SETTLEMENT OF ORDNANCE PROPERTY RETURNS.

The auditing of property returns has progressed satisfactorily during the year. Any lessening of the work due to the unit accountability system of accounting has been partially offset by a large increase in the number of schools and rifle clubs accounting for property and to the work of acquainting them with existing methods of accounting. In spite of this increase this work is found in a slightly more advanced state than one year ago.

The amounts which the audit of property returns showed as due the Government, and the collection of which was assured and obtained by that agency during the fiscal year, are tabulated below:

Collected from officers of the Army.....	\$789. 62
Collected from enlisted men.....	25, 692. 99
Paid by States.....	568. 84
Paid by educational institutions.....	12, 695. 88
Paid by rifle clubs.....	167. 76
Paid by transportation companies.....	2, 410. 30
Paid by executive departments, etc.....	324. 07
Total collected.....	42, 649. 46

The total cost of the clerical force engaged in auditing the returns was \$24,500.

ORDNANCE EQUIPMENT FOR MOBILE ARMY.

During the past year this department has been called upon to issue reserve equipment to the various branches of the mobile army. The first demand came as a result of the Executive order raising all organizations of the Regular Army in the United States to maximum strength. The plans of this department contemplated that the arms and equipments set aside for this purpose at the various recruit depots should be issued to recruits when forwarded to their organizations, but as a result of recommendations made by the commanding officers of recruit depots the arms and equipments for the recruits were packed and shipped with the recruits as baggage. So far as this department is concerned this method of issuing reserve equipment was

satisfactory, although some expense was involved in repacking the equipment. The second demand came when the Organized Militia of the States of Arizona, New Mexico, and Texas was mobilized under the call of the President dated May 9, 1916. The third demand came when the National Guard of all other States and Territories and the District of Columbia was called into the service of the United States under the call of the President dated June 18, 1916.

Information received to date indicates that where the reserve ordnance stores were under the direct control of the department they were promptly supplied and in some cases reached mobilization camps before the organizations. It is reported that there was some delay and confusion in the receipt by the States of the stores set aside in Army field supply depot No. 1. The concentration of such large quantities of stores as was the case in this depot is unwise, as delay in shipment, in case of emergency, is unavoidable. This subject is now being considered by a board of officers appointed by the Secretary of War.

SMALL ARMS.

Automatic pistol.—The automatic pistol, caliber .45, model of 1911, has now been issued to all branches of the Regular Army and to most of the National Guard of the various States and Territories. Reports received indicate that this arm is proving satisfactory in service.

Issue of rifles, model of 1898, to schools and rifle clubs.—Since the provisions of the act of Congress approved April 27, 1914, have been put into effect, 6,342 rifles and 6,279,736 rounds of ammunition have been issued to 859 rifle clubs, of which 624 drew both rifles and ammunition; 234 ammunition only, and 1 rifles only; 71 schools have taken advantage of this act and have drawn 6,671 rifles, 2,508 carbines, and 843,610 rounds of ammunition therefor. The rifles are of the model of 1898; the carbines of the model of 1899 (both Krag-Jørgensens.) The work in connection with these issues has been increasing throughout the year, and in view of recent legislation it is believed that this work will approximately double during the coming fiscal year. The supply of carbines, model of 1899, available for issue is exhausted. While there are repairable carbines on hand, there are no funds available for their repair, except as they may be provided by schools desiring the issue of this arm.

Infantry equipment, model of 1910.—No further change has been made in the matter of the issue of Infantry equipment, model of 1910, although it is expected that during the ensuing fiscal year issue of a limited amount of this model of equipment will be made to the National Guard.

Cavalry equipment, model of 1912.—In view of the criticisms concerning this equipment received after issue had been made to certain regiments, a board was appointed by the Secretary of War, to convene at the Rock Island Arsenal, for the purpose of deciding what changes should be made therein. No full report has as yet been received from this board, and no statement can be made at this time as to what changes will ultimately be made in the model of 1912 equipment, although it is believed that radical changes will be made in the saddle, and probably in the manner in which troopers carry the rifle. The board has developed and recommended a model of officer's

saddle, and experimental saddles have been manufactured. The design is awaiting the approval of the Secretary of War. Upon recommendation of the board the design of the pistol holster has been changed by omitting the hanger and swivel, shortening the holster, thus eliminating its tendency to swing. Pending action of the present Cavalry Equipment Board manufacture of model of 1912 Cavalry equipment has been suspended.

Polo saddle.—The 48 polo saddles referred to in my last annual report as being issued for further test proved satisfactory, and this model has been adopted for general use in service; to be designated as "training saddle." These saddles are to be manufactured in two sizes, 17-inch and 18-inch, in the ratio of two 17-inch to three 18-inch. In view of the limited funds available for the manufacture of these saddles the new model is to be issued to the service only for replacement of such polo saddles as have become unserviceable.

Range finders, 80-centimeter base.—Issue of these range finders to all Infantry and Cavalry organizations of the Regular Army has now been completed. The original recommendation of the School of Musketry contemplated providing each company or troop and each machine-gun company or troop with one of these range finders. Thus far some regiments have been supplied with the full number, 13, and other regiments with but 4, 1 for each battalion or squadron and 1 for the machine-gun company or troop. As a result of experience had in the Southern Department, the Secretary of War has directed that the number of 80-centimeter base range finders be limited to 4 per regiment. One hundred and twenty of these range finders have also been issued to the National Guard of the various States and Territories.

Ammunition for the national matches.—During the past year existing law prevented the procurement of small-arms ammunition for this purpose from commercial manufacturers, as was formerly done, and such ammunition as will be used this year will be furnished by the Frankford Arsenal.

Small-arms ammunition pack.—A satisfactory design of small-arms ammunition pack has been decided upon, and the manufacture thereof in limited quantity has been undertaken in order to provide a sufficient number for service test.

Electrically operated targets.—Considerable difficulty has been experienced with the targets installed at Fort William McKinley, P. I., because of faulty installation; otherwise the targets are promising. Steps have been taken to correct the trouble above mentioned, and to submit the targets to further test.

Fencing equipment, Cavalry.—As a result of tests conducted in the service, a new design of Cavalry fencing equipment has been adopted. The funds available for the manufacture of this class of matériel have not been sufficient to permit the replacement of the matériel now in service except that which has become unserviceable.

Fencing equipment, Infantry.—A fencing outfit for Infantry, which has given satisfaction in extensive tests in the Philippine Islands and in the Southern Department, has been adopted. The fencing musket is made of wood, after a design developed in the Philippine Department; the plastron and gloves are practically the same as those now issued, but the mask has been somewhat modified.

Manufacture of this equipment will be undertaken with funds which have become available.

Small-arms ammunition, caliber .30.—It has heretofore been the practice to reload small-arms cartridge cases turned in from the service. Extended investigation has shown, however, that such reloaded cases are unreliable in machine guns. Owing to the greatly increased importance attached to the machine gun as a result of the present European war, it has been considered necessary to discontinue the use of fired cases in manufacturing small-arms ammunition.

Battle sight.—Tests are still being made to determine the proper setting for the battle sight. As yet no final decision has been arrived at in this matter. Due to unavoidable interruptions which have taken place at the School of Musketry, it has been impossible for that institution to submit a final report.

Steel helmet, plastron, and shield.—In view of the fact that general use is being made of steel helmets, plastrons, and shields in the European war, the department is now conducting experiments to determine the most suitable type of these articles for use in the service.

Aiming device.—An aiming device similar to that in use in the French Army has been adopted and general issue thereof is to be made to service in lieu of the present design.

Wire cutter.—The insulated handles of service wire cutters show a great falling off in resistance after a few months' storage. The department is endeavoring to get reliable information on this subject from abroad to assist in devising a new type of wire cutter.

Pouch for sergeants.—As a result of recommendations from the service, a limited number of pouches have been manufactured and issued for test. The object of this pouch is to provide a safe and convenient receptacle for sergeants to carry adhesive tape, foot powder, the "housewife," etc.

Telescopic musket sight.—Following tests conducted at the School of Musketry, the Goerz telescopic musket sight was recommended for adoption. On account of the European war none of these sights could be procured up to this date. The manufacture of one, working from the sample on hand, which has been tested at the School of Musketry, has been undertaken.

Armor-piercing steel bullets.—Reports received from the theater of war in Europe indicate that the belligerents are using armor-piercing bullets for penetration of various types of steel armor found in trenches, etc., and against Field Artillery matériel. A satisfactory bullet of this type has been developed at the Frankford Arsenal.

Gallery practice pistol, caliber .22.—A gallery practice pistol, caliber .22, having the same weight and balance as the service pistol, has been developed at the Springfield Armory and recommended for adoption. A limited number are being manufactured for service test before undertaking manufacture in quantity.

Rifle, hand, and illuminating grenades.—Although satisfactory designs have been perfected for some time and a limited number of such grenades have been manufactured, no provision had been made for training men in the use of grenades, and for a reserve supply. The appropriations for the present fiscal year carry funds which provide grenades for instruction purposes and will permit the inauguration of a reserve supply.

CAPACITY FOR THE PRODUCTION OF WAR MATÉRIEL.

The European war has brought into sharp prominence the necessity, in a war of magnitude, for employing all the manufacturing resources of the Nation, both public and private, in the production of fighting matériel for the use of the armies in the field; and it has also demonstrated that the failure to make preparation in advance for the use of private industry in the aid of Government factories gives rise to dangerous delay in the commencement of production on the large scale which has now, for the first time, characterized war between civilized countries. In the military legislation of the session of Congress just past the necessity for this advance preparation has been realized and partially provided for. The national-defense act makes in order the appropriation in supply bills of funds for procuring special jigs, dies, fixtures, etc., for fitting private establishments for the manufacture of the particular models of arms and ammunition which are employed in the military service, and grants the War Department relief from the statutory competitive methods in providing for the fitting out of particular establishments with these special appliances, and in placing what might be called educational orders, in pursuance of the policy of insuring the readiness of these establishments to turn out war matériel of satisfactory quality. The supply bills make appropriations, under various headings, for carrying out the policy of the legislation in the national-defense act, both in the procurement of fixtures, etc., and in the placing of orders to insure practice and understanding in the use of these appliances for their intended purpose.

These special provisions are all in the right direction, and will materially aid this department in its plans for utilizing private industry for supplying such emergency needs as may arise. Unfortunately, they do not constitute the only kind of legislation found in the supply bills upon the special utilization of private industry, and are to a certain extent offset in their intentions by restrictions upon the employment of appropriations in general for such patronage of private manufacturers as would of itself operate to prepare them for the Government's use, or to keep in existence plants which have already fitted themselves for the manufacture of war matériel in order to meet the orders of European Governments. Some of the appropriations are accompanied by the provision that they shall not be used for placing orders with private manufacturers at prices exceeding by more than 25 per cent the cost of manufacturing the same matériel in the Government arsenals, or the estimated cost of such matériel when it has not been previously manufactured in the arsenals. As the Government has been able, in some cases, to manufacture quite cheaply, this may operate to prevent the placing of orders with private manufacturers. Other appropriations are accompanied by the provision that they shall not be expended in such a manner as to prevent the operation of the arsenals at their most economical capacity. As this capacity is probably that of a two-shift rate, the effect of the legislation is to prevent any of the funds appropriated from being applied to private orders until after the arsenals shall be running at full capacity upon a two-shift basis, and then only to the extent of the excess of the appropriations over

the amounts necessary to keep the arsenals going upon this basis. Many of the appropriations are of such size as to afford some excess for private orders, but the number of private establishments which can be utilized and trained in time of peace will be less than it would be if there could be employed for the purpose the funds in excess of the amounts which will be necessary to operate the arsenals upon a one-shift basis only, at which rate they would themselves also have a larger reserve of expansibility for the needs of war time. There are thus opposing tendencies in the legislation which has been enacted with reference to what has sometimes been spoken of as the mobilization of industry.

NITRIC-ACID SUPPLY.

In my last annual report I called attention to the important part played by nitric acid in the manufacture of smokeless powder and high explosives; to the fact that nitrogen in nitric acid is obtained from sodium nitrate which comes from Chile; and that this country is therefore dependent for its powder and high-explosive manufacture upon Chile. Congress has met this situation by appropriating a considerable sum for increasing the reserve supply of sodium nitrate, and also by appropriating \$20,000,000 for a nitric-acid plant. The first step in the work of developing a supply of nitric acid, which shall be independent of any foreign source of raw material, is an investigation to determine the best, cheapest, and most available means for the production of nitrates. The War Department has called upon the National Academy of Sciences for a report which will assist it in reaching a conclusion as to the best method among those known for manufacturing nitric acid by a process which does not involve dependence upon a foreign source of supply, taking into consideration all the legislation, with reference to the use of the plant for the manufacture of fertilizer and other substances, contained in the section of the act making the appropriation above mentioned. The National Academy has associated with it the American Chemical Society, and a committee has been appointed from the membership of both bodies for the consideration of the subject. A report is expected in a short time. In addition, this department is making certain investigations relating to individual steps in the process of manufacture of nitric acid and to the practice in various European countries, in which it is receiving the active and efficient assistance of the Bureau of Mines of the Department of the Interior.

SEACOAST GUNS AND MORTARS.

Installed armament.—Reports received from armament officers and from the Coast Artillery indicate that the guns and mortars mounted in the seacoast fortifications have been maintained in a satisfactory state of efficiency during the year. No serious defects were developed during the annual target practice of the troops of the regular service and of the National Guard. The difficulties reported in connection with the 12-inch mortar, model of 1912, mounted in the fortifications of the Canal Zone, have been successfully overcome by making the indicated modifications, but reports covering the continued use of these mortars as originally issued indicated that the difficulties

were being overcome without modification, at least in part, by the use of special lubricating methods adopted as a result of careful observation of the behavior of this matériel under the peculiar climatic conditions of the Canal Zone.

Gun construction.—The designs of the new types of cannon included in the approved project of the Board of Review are well under way and their manufacture is about to be undertaken. In addition to larger and more powerful guns and mortars for fixed seacoast emplacements, there are included types for the attack of aircraft and for mounting upon specially designed railroad cars.

FACILITIES FOR THE MANUFACTURE OF SMOKELESS POWDER.

For the past three or four years the department has manufactured its entire supply of both caliber .30 powder and cannon powder; but of the amounts called for by the greatly increased appropriations made at the last session of Congress, Picatinny Arsenal will be able to manufacture only 40 per cent of that to be procured during the fiscal year 1917. Congress has appropriated funds for rounding out the capacity of the Picatinny Arsenal for the manufacture of smokeless powder to 11,000 pounds per day, on a three-shift basis, of which 6,000 pounds may be reworked powder.

There has also been a recent appropriation by Congress of \$500,000 for a new Army powder factory. While the act appropriating this money is so worded that it may be expended for the enlargement of any existing plants owned by the Government, a new factory, on a new site, will probably be decided upon. In another part of my report I refer to the congressional appropriation for a Government nitric acid plant, and there are many considerations pointing to the desirability of locating the new powder plant at the same place. The requirement that the plant be reasonably inaccessible to a possible enemy calls for a site between the Allegheny Mountains and the Sierra Nevadas, well withdrawn from the northern and southern borders.

MACHINE GUNS.

The greatly increased prominence which the European war has given to machine guns renders appropriate an examination of the subject, especially with reference to our own service. This class of weapon had been developed to a serviceable stage at the time of the Spanish-American War; but neither in that war, nor the Boer war, nor the Philippine insurrection, nor the Pekin relief expedition, nor the Russo-Japanese War, nor the Balkan War had it attracted anything like the attention which has resulted from its use in the European war. The fire effect attainable by the use of machine guns had received ample proving ground demonstration, but the use in the European war of large numbers of troops, in comparatively dense formations, together with the diminished weight and correspondingly increased portability of machine guns, have shown for it an effectiveness which was not realized in the earlier contests when more dispersed orders of battle were the rule. The Germans had apparently realized better than anyone else the value of machine guns in the kind of wars which they expected to be engaged in, and therefore

supplied their troops in greater numbers than did other powers. We, in common with most other civilized nations, had an appreciation of the need for machine guns which was expressed in our established allowance of about 4 per regiment, the supply of which for the Regular service was complete, and for the National Guard and for war-time reserve was in process of accumulation at the very moderate rate corresponding to annual appropriations of about \$150,000.

An appropriation of this size was made in the Army act of 1912, but before the consideration of the bill for the next year expressions of dissatisfaction with the rifle with which the service was then, and still is, principally armed, the Benét-Mercié, otherwise known as the light Hotchkiss, had reached the ears of Congress. This dissatisfaction was, I believe, largely due to lack of proper instruction in the use of this class of weapon, and the belief on the part of numbers of officers in the service that there was some other machine gun of such simpler construction that no great amount of special instruction would be necessary for its use; which was a radical error. The Army appropriation act of 1913, therefore, instead of making an appropriation for machine guns authorized the Secretary of War to contract for their construction to the extent of \$150,000, "if in his opinion it be for the best interests of the service." This legislation reflected doubt in the mind of Congress as to the suitability of the service machine rifle, and threw upon the Secretary of War a more impressive burden than usual of responsibility for the type of machine rifle for which contract should be made. Before urging upon the Secretary, therefore, the exercise of the authority which had, with some warning, been conferred upon him, the Ordnance Department joined in the dispositions for a competitive test of automatic machine rifles, which was held in the autumn of 1913 and continued in the spring of 1914; the guns now most prominent among those which were tested being the Benét-Mercié, the Vickers, and the Lewis. At the searching test held in the autumn of 1913 all the competing guns were eliminated except the Benét-Mercié and the Vickers, and of these a field test was made in the spring of 1914 which resulted in the selection of the Vickers. During the course of the tests the Army bill of 1914 was passed, but as no conclusion had yet been reached the bill made no appropriation for this class of weapon. At the time of the passage of the bill of the following year, 1915, the Vickers gun had been adopted as the approved type, and that bill therefore made an appropriation of \$150,000 for machine rifles, and in addition reappropriated an unexpended balance of \$44,421, which had been left over from preceding appropriations, at the time when the question of substituting a new rifle for the Benét-Mercié was actively taken up. The funds thus made definitely available, without conditions, were made the basis of a contract for Vickers guns. No delivery of these guns has yet been had, owing to the interference of the European war, both with deliveries from abroad and with preparation for the manufacture of this British gun in this country.

It is thus seen that the suspension of procurement of machine rifles commenced in 1913 owing to doubt as to the service type in the mind of Congress; that is, of the Military Committee of the House of Representatives; that tests to resolve this doubt were

undertaken; that the tests showed the Benét-Mercié and the Vickers guns to be the best in existence, and the Vickers to be the better of these two; that up to the present time it has not been possible to procure a supply of Vickers guns. It can be stated, however, that an abundant capacity for the manufacture of Vickers guns will be available in this country within a few months.

Under these conditions, if such a necessity had been considered to exist as to call for the earlier procurement of machine guns than was possible of the Vickers type, the manufacture of the Benét-Mercié gun would have had to be continued at the arsenal and the private factory which were then turning it out. There would have been no justification for getting any other gun. It may be that the Ordnance Department should have urged upon the Secretary of War, and upon Congress, with insistence, the expenditure of large sums for the further procurement of Benét-Mercié guns, notwithstanding the fact that a better gun had become known. It did not do so; and if a mistake was made it will be shown by the rise of an emergency really calling for the use of a larger number of machine guns than we may have when it comes. So far this has not taken place.

Since the conclusion of the tests above described, one of the prominent guns tested, the Lewis gun, has received an additional trial, in April last. This test, like the preceding one, was made by a board consisting of officers of different branches of the service, including one Ordnance officer. As a result of the test the board reported that the Lewis gun was not equal to either the Vickers or the Benét-Mercié gun employed in the preceding test. If, therefore, it had, at any time up to the present, been decided to undertake the manufacture of additional guns, without waiting for the Vickers, they would have had to be Benét-Mercié and not Lewis guns, unless the most careful conclusions it had been practicable to obtain had been disregarded; since it must be borne in mind that the considerable use of the Lewis gun by the British Army has given no comparative information as between it and the Benét-Mercié, which is used by the French, Russian, and Japanese armies.

When the militia was called into the Federal service last June, 44 regiments had been equipped with 4 machine guns each, of the Benét-Mercié type, which is that still used in the regular service, although the Vickers has been approved for future supply. The number of guns required for special purposes along the Mexican border was such that the very small number available did not permit equipping the additional militia regiments with this type, and as there were available but few Maxim machine guns, which had been superseded by the Benét-Mercié when it became the adopted type, it became essential to procure machine guns for the remaining militia regiments as promptly as practicable. As a result, 353 guns of the Lewis type, upon the recommendation of this department, were procured under terms of practically immediate delivery. The majority were shipped to the commanding officer of the San Antonio Arsenal for distribution, as the militia regiments were being sent forward to the Southern Department as rapidly as practicable and hence no certainty existed of being able to make deliveries to organizations before their departure for that department. As the design

and manufacture of pack outfits for these guns would have required a considerable period, light automobile trucks, five to an organization, were procured in place of packs.

So little time has elapsed since the delivery of these guns that no comment in regard to their service performance is now practicable.

Advantage has been taken of the mobilization of troops in the Southern Department to do everything possible to further instruction of the machine gun organizations in the operation and care of their arm, which has heretofore been in a very backward condition, due largely to the fact that such organizations were not until recently recognized by law, and were of a temporary character, made up of details from other organizations. In addition, there was no honor or reward attached to proficiency in the use of the gun, but the members received medals and additional pay for proficiency with the small-arms rifle, which is not used at all in a machine gun unit. The necessity for thorough training in the use of this arm has also not heretofore been appreciated in the Army, nor is it now as well understood as it should be. As a result of experience gained in the war England and France now have machine gun schools, some of them with many thousand pupils, and they do not permit the assignment of either officers or enlisted men to this branch of the service until after the most thorough training. Mechanics specially trained for the work have been sent to the Southern Department from the Springfield Armory to assist in the instruction of troops in the mechanical manipulation of the Benét Mercié and the Maxim guns, and as to the Lewis guns the policy was adopted of not issuing them to organizations until the personnel had been given training in their use. Schools were immediately started at San Antonio Arsenal, at Harlingen, at El Paso, and at such other places as were practicable, and employees of the Savage Arms Co., from which the Lewis guns had been purchased, were employed by the Ordnance Department in connection with the work. The results obtained, even in the limited time which has elapsed, are an encouragement to further effort, and the Lewis guns are entering the service with the advantage which their predecessors ought to have had but did not get.

The Army appropriation act approved August 29, 1916, carries appropriations amounting to \$12,000,000 for the procurement of machine guns, which is sufficient to considerably relieve the existing stringency in the supply of this class of weapon when the guns shall have been procured. Heretofore appropriations for this purpose have averaged about \$150,000 per annum, sufficient for the procurement of less than 100 guns. As yet the War Department has not reached a decision as to the manner of expenditure of these funds and the procurement of guns must await such action. A board has been appointed to consider the subject.

FIELD-ARTILLERY MATÉRIEL.

The tests of the 3-inch gun and split-trail carriage, with approximately 45 degrees traverse of the gun on the carriage, 50 degrees elevation, variable recoil, etc., have been carried to a point where manufacture in quantity has been undertaken. The limber and caisson of this gun have now been tested over all classes of roads,

including cobblestone, at speeds up to 12 miles per hour, for a distance of 3,000 miles, with practically no damage. Orders have been given to subject them to such violent treatment as to cause breakages, in order that the weakest points may be determined. The caisson is provided with springs between the chest and the axle to relieve the road shocks.

The 3.8-inch howitzer and carriage to which I referred in my last annual report, and which is generally of the same type as the 3-inch gun and carriage mentioned above, have been modified for increased ranges and are now undergoing test.

Drawings have been completed under a contract for a 4.7-inch gun and split-trail carriage, and a 6-inch howitzer and split-trail carriage, both with wide traverse, angles of elevation up to 50 degrees, variable recoil, driven spades, etc., and the pilots are under manufacture. It is expected that as soon as these pilots have been subjected to test, and have been found satisfactory, a considerable quantity of this matériel will be procured.

A 7.6-inch howitzer and carriage, with transport wagons, have been completed and are undergoing test. This piece fires a 240-pound projectile from a wheeled carriage. The type is 100 per cent more powerful than the 6-inch howitzer, the heaviest field artillery contemplated by approved projects heretofore in force, and was designed for the purpose of anticipating probable demand for a larger caliber and in accordance with the general scheme for the ratio of increase in calibers heretofore followed. Within the last few months, however, the War Department has decided to omit this caliber from the field-artillery scheme and make the 9.5-inch howitzer, firing a 480-pound projectile, the next in size after the 6-inch. As the 7.6-inch howitzer is of a power equal to the usual foreign equipment of from 8 to 8.5 inches caliber, it will in case of need be very useful, and the pilot is being tested with a view to removing any difficulties that may be encountered, and being prepared to manufacture this type in quantity at any time pending the development of other heavy types.

SUPPLY OF MOBILE ARTILLERY.

Progress in manufacture under appropriations made for the last fiscal year has been at the usual rate. The appropriations available were about the same as for the preceding year, and were sufficient for an appreciable progress. The appropriations and authorizations made in the fortifications and Army acts, approved, respectively, July 6 and August 29, 1916, totaled very much more than for any previous year and there will be correspondingly more satisfactory progress. It has not yet been developed whether full advantage of the appropriations made can be taken, due to restrictive legislation. The Army act requires manufacture at arsenals equal to their capacity for approximately two years, and the fortifications act places a limitation upon the price at which contracts may be let, which may cause difficulty, although it should not do so.

CHANGE IN THE APPROVED FIELD ARTILLERY PROJECT.

The project for the procurement of field artillery under which the War Department has been operating since 1911 was that prescribed

in the proceedings of the so-called "Greble Board". With the information available at the time this board reported it was considered that the quantities of field artillery and ammunition therefor which were recommended were perhaps excessive, judged from the standpoint of the probable appropriation of funds. Although that project called for an increased number of guns per thousand of infantry and cavalry, and an increased allowance of ammunition per gun, as compared with any previous estimate, it was, even in 1911, when compared with the supplies accumulated abroad, very conservative. Something over a year ago another War Department board was convened for the purpose of recommending quantities and types of field artillery and ammunition to be procured in time of peace. Report of this board was submitted to the War College Division of the General Staff and to the Chief of Ordnance, and after very thorough consideration, was, in a modified form, approved by the Secretary of War. This report is generally referred to as that of the "Treat Board," from the name of the senior officer of the board, Col. Charles G. Treat, Field Artillery. The approved project involves an increase in the number of guns per thousand of Infantry and Cavalry of about 60 per cent. The increase in the allowance of ammunition per gun is approximately 40 per cent, and the increase in the force for which equipment is to be procured is about 100 per cent, all as compared with the Greble Board report. The quantities of field artillery, and ammunition therefor, used in the present European war are so enormous as to have been undreamed of before the war. It is consequently thought that if there be any criticism of the approved project referred to it will be against its conservatism.

HEAVY MOBILE AND MOVABLE ARTILLERY.

A railway mount for 4.7-inch howitzer and machine guns has been designed and manufactured and is almost ready to be tested. It is anticipated that from the firings with this equipment a great deal of information with regard to heavier pieces will be secured. Such heavier pieces, with their railway equipment, are being designed and two should shortly be ready for manufacture, funds for the purpose having been appropriated at the last session of the Congress. In addition, negotiations are in progress to ascertain whether such equipment may be obtained from commercial firms. A representative of this department is now in Europe with a view to determining what desirable designs, if any, for this and other classes of equipment may be procurable. A 12-inch howitzer, to be fired from a wheeled mount and to be handled by motor traction, has been designed, and a pilot is being manufactured. This also is among the class of heavy artillery of which a pilot may possibly be procured by purchase.

The great value of movable and mobile artillery of power sufficient for combat with ships of war lies in the prevention of landing troops or using as a base those portions of our coast which are not protected by seacoast fortifications, or rendering such use difficult. As the number of places which can advantageously be fortified is limited and our coast line is extensive, this equipment assumes perhaps a greater importance with us than for any other country. It should not, however, be overlooked that it necessarily has certain disad-

vantages as compared with fixed fortifications, due to its method of mounting and employment and its lack of protection. Substitution of this class of armament for fixed defenses is, however, not intended. As the attack of the Dardanelles forts, which are of comparatively small defensive power and not modern in either construction or equipment, by the most powerful ships in the English and French fleets during 1915 has served but to confirm previous experience to the effect that modern land defenses of reasonable power are practically impregnable against the attack of ships, it follows that substitution of heavy movable artillery for fixed fortifications would be merely giving up a considerable part of the advantages which the latter possess; in other words, if heavy movable artillery of the type and calibers now used in a given fortification were available for that neighborhood it would be concentrated in places where the fixed emplacements now are and would be without the advantages of protection, fixed fire-control systems, etc., which the permanent emplacements possess.

DESIGNING WORK.

Due to the developments of the European war and to the increased activity in the line of preparedness for war in this country that has been evident during the past eighteen months, particularly the desire for the attainment of ranges which have heretofore been considered impracticable, it has become necessary to make new designs for all types of field and seacoast gun carriages intended to be employed. This requirement refers not only to those existing types which it was previously intended to duplicate in future manufacture, many of which are of comparatively recent date, but also to the production of designs for new types and new calibers. There has also developed the need of heavy movable artillery on railway mounts, anti-aircraft artillery both field and seacoast, and other classes. As this country has practically no ordnance-designing experts except those in the Army and Navy and a very small number at one private manufacturing plant, and as the number of officers in this department is insufficient to carry on its routine work, this increase in demand for designs can not be met as promptly as the department would wish. The designing work must be done mainly under the supervision of the head of the department and therefore in this city, and restrictive legislation prevented a prompt effort to expand the drafting force, as the law did not permit increasing the number, or securing space in which any increased number could work in Washington. Both of these difficulties have been met by legislation enacted at the last session of the Congress, and the mechanical facilities for designing work have been greatly increased. The procurement and training of additional men are being pushed as rapidly as practicable, but it is at best a slow process.

Such assistance in this line of work as could be procured from outside the department has been obtained, but the available help is not large. In this connection it should be remembered that all of the munition work that has been done in this country for the European nations at war has been in accordance with designs furnished by those nations.

SEACOAST CARRIAGES.

The issue of seacoast guns and carriages to the Panama fortifications has been completed so far as provided by appropriations available previous to the last session of Congress, except that the 16-inch disappearing carriage is undergoing test at the Sandy Hook Proving Ground. This test has been nearly completed for the carriage as built, without developing any difficulty of consequence. The carriage as originally designed permitted a maximum elevation of 15 degrees. The necessary parts for increasing this elevation to 20 degrees are under manufacture and will be ready for assembly to the carriage in the near future. It is contemplated that the changes will be made at Sandy Hook and that a few rounds for test of the new mechanism will then be fired.

The design and production of the 16-inch disappearing carriage, which is the first of its kind ever made, and which successfully controls the forces resulting from a muzzle energy of 188,894,720 foot-pounds, constituted a very considerable engineering success. The production of this carriage was not undertaken at the time the gun was manufactured and tested, because for a long time there was question as to whether the gun would be emplaced in the seacoast fortifications, and if so, at what point. It would have been difficult to defend the design and manufacture of so expensive a carriage when there was no project for its utilization, and when it might consequently be devoid of the improvements which would surely result from experience, and become one of the older types before it had been used.

Practically all of the manufacture of the armament for the San Pedro and insular fortifications provided by appropriations made prior to the last session of the Congress has been completed.

Appropriations made in the fortifications act approved July 6, 1916, for the procurement of armament were considerably increased over those of previous years. The capacity of the arsenals manufacturing this class of equipment is comparatively small, and it will consequently be necessary to procure a very considerable part by contract. It is hoped that the limitation placed by the law which forbids, except in an emergency, the letting of contracts at prices greater than 25 per cent more than the arsenal cost, or in the absence of an arsenal cost the arsenal estimate, for the same article, will not delay procurement.

COST OF MATERIAL AND LABOR.

The cost of material and labor has increased so extensively, even in the last year, and a continuation of the increase seems so likely, that it is anticipated the procurement of field and seacoast artillery matériel and many other classes of ordnance supplies in the quantities covered by the estimates submitted at the last session of the Congress will not be possible unless additional funds be appropriated at the coming session to complete the work. While the increase varies for different classes, and not in accordance with any fixed rule, it is conservatively estimated that the average increase in cost of ordnance matériel during the past 12 months is from 25 to 40 per cent.

The legislation contained in the naval appropriation act which adds 15 working days' leave of absence with pay for all employees of the Ordnance Department, the provisions of the Army appropriation act which forbid time studies and the payment of premiums, and the tax on munitions imposed by the revenue act will further increase the cost of production over that anticipated at the time the estimates were submitted.

MAINTENANCE OF ARMAMENT OF FORTIFICATIONS.

This work has proceeded satisfactorily during the year, and service guns, mortars, and carriages have been maintained in a good state of efficiency. There has been encountered a rather serious difficulty with the 14-inch disappearing carriage in that several elevating screws have been broken. The pilot carriage at the Sandy Hook Proving Ground was fired 189 rounds before this defect appeared, but several carriages emplaced in the fortifications of the Canal Zone had the screws broken on the first proof firing. This matter is under investigation and it is known that the difficulty can be cured, although the best method of accomplishment of this result requires some experimentation and consequent time. A design for increasing the maximum elevation permitted by these carriages from 15 to 20 degrees is under way, which will correct the difficulty referred to, but a considerable time for manufacture and assembly of these new parts will be required. In the meantime steps are being taken for modification which can be made promptly and will make the carriages serviceable for use at any elevation now permitted until the gearing for the 20-degree elevation can be installed.

IMPROVEMENTS IN INSTALLED SEACOAST GUNS AND CARRIAGES.

Modification of the seacoast matériel of the older types has proceeded as far as funds have permitted. The modification of the 15-pounder balanced pillar carriages, model of 1898, is nearing completion. The firing magnetos referred to in my last annual report have been procured and are being attached to all carriages for guns of 6-inch caliber and over, and are being supplied to all mortar batteries. The tests of the 12-inch disappearing carriage in which the maximum elevation permitted has been increased to 15 degrees have been satisfactorily completed, and the necessary parts for making this alteration to carriages in service are in process of manufacture.

MOTOR EQUIPMENT AS APPLIED TO ORDNANCE MATÉRIEL.

The Army appropriation act approved March 4, 1915, contains an appropriation of \$50,000 for the procurement of armored motor cars, including shielded motor-cycle outfits. This class of equipment is a development of the European war and has had, in effect, no practical trial in this country; nor is it easy to determine what are the best types in use abroad and what constitutes the best use of such types. The department purchased four automobile chassis trucks, equipped them with armor and made such modifications as were necessary for the mounting of machine guns, and shipped them to the troops on the Mexican border for experimental use. Two of these cars were each

provided with two revolving turrets, and were capable of carrying considerable ammunition with a rather large crew, and were very completely equipped, with the result that they weighed in the neighborhood of 11,500 pounds, which is likely to prove too heavy for this class of matériel. It was nevertheless deemed expedient to determine what could be done with so much weight, as an equal or greater load on the wheels will be necessary for the mounting of guns of caliber greater than the machine guns, with which class of equipment experiments are to be made.

Two of the armored automobiles each had one revolving turret mounting one machine gun, and weighed about 8,500 pounds each. This latter type will, it is believed from reports thus far received, prove to be more satisfactory for general use than the heavier type. Experiments are now under way with a still lighter type which should weigh not more than 6,500 pounds, which, of course, will require that the crew shall be reduced, the size of the armored space reduced, and the amount of ammunition carried lessened. This type, however, gives great mobility and will, it is believed, in spite of the cramped quarters, prove to serve a very useful purpose.

The armored motor cars which were sent to the Southern Department had not been thoroughly tested by this department and would not under normal conditions have been issued to the service without exhaustive trial to remove any practical difficulties that could be located. The mobilization of the militia and apparent probability of hostilities resulted, however, in the cars being forwarded as they were at the time the emergency arose, with the expectation that they would be at least of some use.

The design and procurement of a number of motor-cycle machine-gun outfits was also undertaken, resulting in a unit consisting of a machine gun mounted on the side car of a motor cycle, two ammunition and supply caisson side cars, and one motor cycle without side car for the commanding officer of the detachment, for each two guns and pertaining equipment. There has since been added to the unit an additional caisson for each gun. A number of these units, including two different types of motor cycles, were manufactured and furnished to the troops on the border, and they are now undergoing test. The machine-gun mounts were permanently attached to the side cars and arrangements were made for the removal of the guns from the mounts and their use independently thereof by tripods, which were furnished. In addition, spare guns were supplied. As in the case of the armored motor cars, this equipment was entirely experimental and was sent to the border before any opportunity had been had for test. Some difficulties have therefore been encountered which are being corrected, and it is expected that the use now being had will develop other troubles and will eventually result in the procurement of a satisfactory type. A change in the design is now being made so that the gun will be mounted on the side car chassis by means of a tripod which is readily detachable, thus enabling use either on the side car or removed therefrom.

The appropriation for this class of equipment made by the Army appropriation act of August 28, 1916, is \$500,000, so that it is expected to make considerable progress during the year toward procurement of a supply of armored automobiles and shielded motor-cycle outfits for the service.

There have been conducted at Fort Sill and at the Rock Island Arsenal tests of tractors and trucks for use in connection with heavy field artillery, in replacement of horses. The promise of success with the caterpillar type of 45-horsepower tractor, hauling approximately 16,000 pounds, made up of a 4.7-inch gun or 6-inch howitzer, with a loaded ammunition limber and caisson, has been such that one battery of heavy artillery has already been equipped for experimental trial of this class of traction. The battery is also being furnished trucks for transporting one-half of the ammunition and for replacement of the battery and store wagons. In addition, the men who have heretofore been mounted on horses are to be transported on motor vehicles or motor cycles. The experiment was not extended to a greater number of organizations because of lack of funds at the time. There is now being procured motor equipment of the class referred to above for the entire Ninth Regiment of Field Artillery, which is stationed in the Hawaiian Islands, where motor traction has even greater advantages than is ordinarily the case. It is considered that the development of motor traction as applied to ordnance equipment is one of the most important subjects before the department at this time, and every effort is being made to test and procure satisfactory matériel.

COAST ARTILLERY PRACTICE.

Reports received during the year of Coast Artillery target practice indicate generally satisfactory behavior of the ordnance matériel used in this work.

Owing to the high pressures encountered in target practice during the past few years a number of lots of powder have been withdrawn from the service and a suspension placed on the use of certain other lots pending further investigation or ultimate replacement. The results obtained in target practice with each lot of powder are being carefully recorded and analyzed. The data thus obtained form a valuable record of the performance of different powders in the service and will have considerable bearing upon the question of withdrawal of powders for reworking.

The satisfactory results obtained at the Sandy Hook Proving Ground with the use of single-section core-igniter charges in major caliber guns have led to the use of this form of charge in lieu of the standard multiple-section charge for this year's target practice with major caliber guns. All reports so far received indicate a marked improvement in the uniformity of pressures and velocities wherever single-section charges were used.

High magazine temperatures in certain outlying possessions, particularly in the Canal Zone, have led to a study being made of these conditions with a view to possible correction of established charges for the prevailing temperatures.

FIELD ARTILLERY PRACTICE.

Behavior of matériel.—Reports from the service covering recent target practice indicate that the Field Artillery cannon, carriages, and ammunition are giving general satisfaction. The target practice reports received are consolidated and classified to form a permanent and valuable record of the behavior of the matériel, supplementing

the proving ground and acceptance tests records. The enlarged expenditure of ammunition authorized for next year will afford an increased opportunity to observe the behavior of the matériel, correct defects, and effect improvements.

Allowance of ammunition.—Recent legislation has provided a much needed increase in the amounts available for expenditure for target practice purposes for the Field Artillery, so that it will be possible next year to provide a more adequate allowance for the proper instruction of the personnel of the Field Artillery batteries and of the student officers at the School of Fire. This increased allowance is particularly required for calibers larger than 3-inch to determine the best method of handling these cannon to develop their full efficiency. With such cannon the Field Artillery has had little and in the majority of cases no experience.

Subcaliber guns.—A subcaliber gun, using a projectile weighing 1.7 pounds, has been adopted for guns and howitzers of 3.8-inch caliber and larger. The caliber .30 subcaliber gun has been retained for the 2.95-inch mountain and 3-inch field guns. The velocity of the 1.7-pounder subcaliber gun has been established, so that in its use the service range scale may be used. Adequate allowance of ammunition for these guns has been provided.

INSPECTOR OF ORDNANCE, RICHMOND, VA.

The duties of inspector of ordnance at Richmond, Va., and at the Washington Steel & Ordnance Co., Giesboro Manor, D. C., were performed by Maj. M. L. Brett, in addition to his duties in the Office of the Chief of Ordnance.

The inspection of magnetos at the works of the National Electrical Supply Co., in Washington, D. C., was included in the work of the district, and was in charge of Capt. J. B. Rose, in addition to his duties in the Office of the Chief of Ordnance.

The principal articles under inspection at Richmond were common steel shell and cast-iron shell, under manufacture at the works of The Tredegar Co. This company and the Washington Steel & Ordnance Co. have greatly increased their capacity for the manufacture of projectiles during the past year.

A number of 6-inch cast-iron projectiles were manufactured by the Covington Machine Co., Covington, Va., during the year. The National Electrical Supply Co., of Washington, D. C., has practically completed deliveries under its order for firing magnetos, and has received a supplementary order.

The total value of the matériel under contract at all places under the supervision of this office during the year was \$561,956.21. The value of the matériel completed during the year was \$383,647.22.

INSPECTOR OF ORDNANCE, NEWPORT NEWS, VA.

Maj. J. B. Dillard performed the duties of inspector of ordnance at Newport News, until January 5, 1916, on which date he was relieved by Lieut. R. S. Oberly, who continued on this duty until March 4, 1916, when the office was closed, work having been completed.

The Newport News Shipbuilding & Dry Dock Co. had a contract, dated November 21, 1910, for two 14-inch gun turrets, model of 1910. During the year progress of work on the second turret was somewhat delayed, due to unexpected difficulties with the electrical apparatus, referred to in my previous annual report. These difficulties, however, were corrected by the contractor and the second turret was finally completed on December 30, 1915, and delivery was made on February 28, 1916.

BETHLEHEM STEEL CO.

The duties of inspector of ordnance at the Bethlehem Steel Works were performed during the year by Maj. E. D. Bricker, in addition to his duties as inspector at the Midvale Steel Works and those devolved upon him at the Frankford Arsenal, where he is stationed.

Work has been in progress on 85 different contracts and orders, which consisted principally of the following material: 3-inch gun carriages; design and manufacture of 4.7-inch field guns and 6-inch howitzers, including carriages and limbers therefor; forgings for 4.7-inch, 6-inch, 10-inch, and 14-inch guns; 3-inch shrapnel case forgings; 3-inch, 3.8-inch, 4.7-inch, 6-inch, and 16-inch projectiles; armor shield plates; axle forgings for field artillery vehicles, and miscellaneous forgings and bars. Work of inspection on 14 contracts and orders consisting of 3-inch shrapnel case forgings at the works of the Harrisburg Pipe & Pipe Bending Co., Harrisburg, Pa.; 3.8-inch shrapnel case forgings at the works of the Milton Manufacturing Co., Milton, Pa.; miscellaneous bar steel at the works of the Pennsylvania Steel Co., Steelton, Pa.; and 3-inch and 4.7-inch projectiles at the Standard Steel Works (Baldwin Locomotive Works), Burnham, Pa., was also performed by this office.

The value of the material under manufacture during the year was \$1,034,254. The value of the material completed during the year was \$72,055.27. The total weight of shipments made during the year was 2,773,169 pounds.

INSPECTOR OF ORDNANCE, PITTSBURGH, PA.

The inspection work covered by this office was in charge of Capt. J. B. Rose during the entire year. It has included all ordnance material manufactured in western Pennsylvania and Ohio, consisting of 107 different orders or contracts, under which manufacture was in progress at 26 different plants. The principal articles under inspection were as follows: Azimuth instruments, at the works of the Warner & Swasey Co.; 3-inch shrapnel cases; forgings for 3.8-inch and 4.7-inch shrapnel cases; forgings for 3-inch common steel shell; 21-second combination fuzes, and orders for miscellaneous forgings, bar stock, and finish machining.

INSPECTOR OF ORDNANCE, MIDVALE STEEL WORKS.

The duties of inspector of ordnance at the Midvale Steel Works were performed during the year by Maj. E. D. Bricker, in addition

to his duties as inspector at the Bethlehem Steel Works and those devolved upon him at the Frankford Arsenal, where he is stationed.

The work consisted principally in the inspection of material for guns and gun carriages; 14-inch armor-piercing shell; steel for shrapnel cases, manufactured at the works of the Midvale Steel Co., and at the works of the Carpenter Steel Co., Reading, Pa.; forgings for 3-inch and 4.7-inch common steel shell, manufactured at the works of the J. G. Brill Co., and the Baldwin Locomotive Works, Philadelphia, Pa.; and of miscellaneous ordnance material manufactured at 13 other establishments in Philadelphia and vicinity. The total number of different contracts and orders was 157.

The total value of the material under manufacture was \$774,641.22, of which that to the value of \$577,325.77 was completed. The total weight of material shipped during the year was 4,461,362 pounds.

SANDY HOOK PROVING GROUND.

Sandy Hook Proving Ground was commanded by Lieut. Col. T. C. Dickson, from July 1 to August 16, 1915; by Maj. J. W. Hawkins, from August 17 to October 15, 1915; by Maj. W. I. Westervelt, from October 16 to December 10, 1915; and by the present commanding officer, Lieut. Col. C. L'H. Ruggles, since December 11, 1915. Lieut. Col. Ruggles is also president of the Ordnance Board, member of the Board for Testing Rifled Cannon, and armament officer of the Sandy Hook armament district.

The amount of proof work completed during the year was greater than that of preceding years. This work included, among others, 33 tests against armor plate; 154 tests of fuzes; testing and retesting of 133 lots of powder; proof firing of 39 guns of various calibers. This entailed the preparation and completion of 113 programs of tests and the firing of 6,955 rounds from cannon.

The U. S. S. *Ordnance* carried 30,358 passengers and 2,658,133 pounds of freight during the year. The distance traveled was 12,287 nautical miles; the amount of coal consumed was 1,006 long tons.

The sundry civil appropriation act approved March 3, 1915, carried an appropriation of \$25,000 for permanently filling a portion of the railroad trestle connecting the Government reservation with Highland Beach. This work is now being done by contract, under the supervision of the Engineer Department. During the year 165,083 passengers and 26,744,755 pounds of freight were transported over this railroad, requiring a total movement of 1,343 cars of freight; the amount of coal consumed was 450 long tons.

Ordnance School of Application.—Maj. W. J. Hawkins had charge of the school until August 30, 1915, since which time Maj. W. I. Westervelt has been in charge. The student officers visited 17 plants during the year and saw much of interest in the manufacture of smokeless powder, electrical material, gas engines, steel and steel products, ammunition for all calibers of guns up to 16-inch, and in the generation of power. These trips, especially those to plants making projectiles and fuzes in vast quantities for use abroad, were of much value to the student officers.

ROCK ISLAND ARSENAL.

This arsenal was commanded by Col. Geo. W. Burr, who is also Ordnance officer of the Central Department.

Volume of business.—The volume of business was approximately the same as during the preceding year. In the property department the number of shipments of stores received and issued during the year was 13,457, comprising 149,172 packages, weighing 20,072,516 pounds. In addition there was received for manufacturing purposes raw material aggregating 32,330,812 pounds. The number of invoices of stores received and issued was 9,069, and the total number of quartermaster's bills of lading received and issued was 3,150. In the disbursing division the total number of cash vouchers paid was 4,245. The disbursements for material amounted to \$1,868,308.69; those for labor to \$1,548,202.52. The average number of employees was 1,884, varying from a minimum of 1,786 to a maximum of 1,921 on June 30, 1916.

Issues to the service.—Issues to the service and to depots for reissue have been promptly made, except in a few instances when the necessary stores were not on hand and had to be purchased or fabricated before issue. On June 20, 1916, telegraphic notification was received of the mobilization of the National Guard, and by June 27 the arsenal had shipped the ordnance equipment necessary to raise the mobilized guard from peace to war strength to the mobilization points in the States of Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Kansas, Nebraska, Colorado, and Wyoming. Many other extraordinary issues were made during the same period.

Needs of the arsenal.—The principal needs of the arsenal are additional storage facilities, which should be provided by a warehouse building of large capacity, equipped with adequate handling and shipping facilities; a central steam heating plant of a capacity to provide for present needs and prospective expansion, fitted with modern labor and fuel saving appliances; a connecting curtain between shops G and I to put the field artillery shops under one roof, instead of in two disconnected buildings as at present; rearrangement of the equipment and carpenter shops, the former in shop H and the latter in shop C buildings, with necessary replacement of old and addition of new machine facilities; additional quarters for officers not now provided with quarters; and additional facilities for the manufacture of field artillery matériel.

General repairs and additions to plant.—During the year approximately 1,200 feet of 8-inch water main have been laid and one-half mile of taroid macadam roads built. The entire roadway of the wagon bridge and viaduct connecting the island with the city of Rock Island has been renewed with creosoted timber substructure and brick paving, and the entire structure has been repainted. A cast-iron casing, filled with concrete, has been applied to the underside of the viaduct span to protect it from the blasts of locomotives. A modern system of semaphore signals for the protection of the draw

span of the Rock Island Bridge, provided by the appropriation of \$3,600, contained in the sundry civil act approved August 1, 1914, has been installed and is working satisfactorily. The repairs to the foundations and walls of shop H building, provided by an appropriation of \$65,000, contained in the same act, have been completed, and this building is now in condition for use. The repairs to the arsenal building, provided by an appropriation of \$2,400, contained in the act approved March 3, 1915, have been completed, and the basement of this building is again in condition for use. The appropriation of \$15,000, also contained in the last-mentioned act, has been expended in the construction and equipment of a flat-roofed, concrete storehouse for the storage of oils and other inflammable materials. This building adjoins storehouse A, to which it is connected by a tunnel, and is known as "Storehouse A Annex."

Welfare of employees.—Continued attention has been given to the subject of adequate safety devices to reduce the number of preventable accidents. Sanitary drinking fountains have been installed in shops G and L. The employees' school, inaugurated last year for the purpose of giving to employees who desire it instruction in simple mathematics and in the reading of drawings, has been continued with beneficial results. At the end of the year approximately 100 employees were availing themselves of this instruction, and the effect of the schooling is noticeable in the reduced loss to the Government in spoiled work attributable to mistakes which the schooling is designed to correct.

Apprentices.—Effort is being made to interest the proper class of boys in the apprentice courses at the arsenal. Continued attention is being given to these apprentices throughout their course. All apprentices are required to attend school four hours each week, two sessions of two hours each. The draftsman in charge of the employees' school mentioned in preceding paragraph is also in charge of the apprentices' school. The subjects pursued, theoretical and practical, are suited to the needs of the individual apprentice. At the end of the year the arsenal had on its rolls 47 machinist and 2 patternmaker apprentices.

Principal output.—The shops in operation at the close of the year included a mobile artillery vehicle shop, harness shop, leather and cloth departments, smith shop, foundry, equipment shop, tin shop, polishing and plating shop, woodworking and painting shops, and small-arms repair shop. The output of these shops necessarily embraces a great variety of articles, including the manufacture and alteration of carriages, limbers, caissons, battery wagons, store wagons, reels and carts for mobile artillery, the manufacture of artillery harness, pack outfits for mountain artillery and machine guns, horse equipments for cavalry, personal and mess equipments for all arms of the service, targets and target supplies, miscellaneous insignia, cartridge storage cases and other material for Coast Artillery, in addition to the repair for reissue of unserviceable but repairable material of these different classes turned in by the service for that purpose. It has included a large amount of work on the infantry equipment, model of 1910, and targets and target material. In the mobile artillery carriage shops it has included the comple-

tion of 512 artillery vehicles of 32 different kinds; the armoring of four motor cars; the manufacture of sets of test tools for six different vehicles, in addition to miscellaneous test tools and gauges; the inspection, correction of defects, and modifications of 149 vehicles of 4 different kinds received from contractors; the preparation for issue of 16 complete batteries of various calibers and of 211 vehicles of different kinds; the conduct of 20 road tests of various vehicles and appliances, in addition to the test of nine motor trucks and tractors of different makes; the performance of a large amount of work on 95 carriages and 1,269 other vehicles in process of manufacture, as well as the manufacture of a multitude of miscellaneous parts for issue to the service and the overhauling and repairing of a large number of mobile artillery parts turned in from the service for that purpose. In addition, these shops have carried on a large amount of experimental work of various kinds, have tested and submitted reports on various devices, and have originated many improvements in existing material.

Improvements in manufacturing methods.—Improvements in the rapidity and economy of manufacturing operations have been continued during the year. These improvements are due to the installation and use of multiple spindle drills wherever practicable; to the use of jigs with cam-action fastenings and quick-release devices; to the use of autogenous welding in saving otherwise defective or spoiled material; to the use of light portable motors with flexible shafts for countersinking, reaming, and burring; to the use of double and multiple jigs instead of single jigs; to the use of spot welding instead of riveting, and of punching instead of drilling for rivet holes in sheet metal, thus saving time and, in many cases, expensive drill jigs; to the use of continuous-milling fixtures; and to the speeding up of drill presses to take full advantage of the possibilities of high-speed drills.

Increased output.—These improvements in the methods of manufacture largely increase the output of the machine, as is indicated by the following examples:

	Former output, 8 hours.	Present output, 8 hours.
Brake crank shaft bearings, milling and drilling.....	32	200
Apron latch bodies, milling and drilling.....	32	200
Lock bars, hollow milling.....	16	150
60-inch wheel fastenings, milling.....	75	200
Brake shaft bearings, drilling.....	32	64
58-inch hub bands, milling wrench slots.....	20	100
Brake lever catches, milling.....	60	120
Doubletree rods, milling.....	32	250
Clasps, milling.....	200	800
Door hinges, female, milling.....	50	450
Door hinges, male, milling.....	50	450

Reduction in labor costs.—Improvements in shop administration and in methods are frequently better indicated by the reduction in labor cost of an article than in its total cost, as it may happen that the cost of the material entering into the manufacture of the article, which cost is beyond the control of shop management, will offset any

reduction in manufacturing costs. The following figures are, therefore, given as indicating some reductions which have been made in the labor costs of articles manufactured at this arsenal during the past year as compared with former costs. These reductions are entirely due to better methods of doing the work, or to slight changes in design for the purpose of facilitating manufacture. The actual wages paid the employees of the arsenal have been increased during the year, so that the showing in reduction is not as great as the improvements in methods would justify.

	Former cost per 100.	Present cost per 100.
D targets for Hollifield outfits.....	\$0.03067	\$0.02047
Y targets for Hollifield outfits.....	.075	.067
Carpenter's chests, woodwork.....	1,615.00	1,193.00
56-inch artillery wheels, woodwork.....	246.00	165.00
Canteens, model of 1910.....	12.00	11.00
Cups, model of 1910.....	2.00	2.00
Currycombs, model of 1913.....	3.64	3.25
Service saddles, model of 1912, metal work.....	160.00	111.00
Thimbles for sewing palms.....	9.50	3.00
Expert rifleman's badges, bronze.....	24.00	9.50
Pistol expert badges, silver.....	24.50	11.00
Bridoon reins for Cavalry bridles.....	7.80	4.79
Curb reins for Cavalry bridles.....	6.80	4.46
Side bars for service saddles.....	10.90	6.00
Canvas bags for small stores.....	30.00	12.00
Canvas bags for nails.....	29.00	13.00
Bridles, complete, model of 1910.....	75.00	50.00
Cavassons, complete, model of 1912.....	90.00	70.00
Case, complete, for battery commanders' telescope.....	850.00	450.00
Harness, complete, for Signal Corps.....	900.00	750.00
Saddles, service, complete, model of 1912.....	600.00	450.00
Pommel pockets, model of 1912.....	80.00	55.00
Loop for stirrup tread, model of 1912.....	1.687	1.607
Curb bit branches, model of 1909.....	2.01	1.91
Spurs, model of 1911.....	2.121	1.742
Picket pins, model of 1912.....	13.00	6.90
Mouthpieces for bolo and bayonet standards.....	4.5716	3.40
Picket pins, Cavalry.....	37.00	12.00
Spanners, double end.....	105.50	16.50
Spanners, single end.....	6.40	4.30
Brake beams, first operation.....	114.00	83.00
Canteen collars.....	.80	.20
1-inch snap hooks.....	.45	.40
Hub liners:		
56-inch wheel.....	17.50	4.00
60-inch wheel.....	35.00	5.00
Oil-can nozzles.....	2.00	.65
Axles, forging of ends.....	129.00	82.00
Doubletree hooks.....	28.35	17.35
Door handles.....	39.70	26.70
Singletree hooks for 3-inch matériel.....	52.70	40.00
Pivot stakes.....	2.40	1.41
Tires (scarfing), 56-inch wheels.....	31.64	19.00
Seat supports (trimming).....	17.00	2.00
Neck yoke stops (trimming).....	7.00	1.00
Wheel hooks (trimming).....	46.53	37.00
Stay rods (complete) for sliding target.....	61.87	3.84

Reduction in total cost.—The following table gives a few of the reductions in total costs of articles made at the arsenal during the year:

	Former cost per 100.	Present cost per 100.
Currycombs, model of 1913.....	\$16.00	\$14.00
Thimbles for sewing palms.....	17.00	8.00
Expert rifleman's badges.....	45.00	23.00
Pistol expert's badges.....	67.00	40.00
Bags, for bacon, complete.....	11.00	8.00
Bags, feed, model of 1912, complete.....	115.00	103.00
Bags, ration, model of 1912, complete.....	330.00	326.00
Boot, rifle carrier, model of 1912, complete.....	513.00	449.00
Bridle, halter, model of 1910, complete.....	568.00	495.00
Covers, pack, complete.....	251.00	241.00
Covers, canteen, dismounted, model of 1910, complete.....	40.00	38.00
Cavassons, model of 1912, complete.....	479.00	343.00
Case, battery commander's telescope, complete.....	2,015.50	1,604.00
Harness, artillery, lead, complete.....	12,567.00	11,843.00
Harness, artillery, wheel, complete.....	14,408.00	13,572.00
Harness, Signal Corps, wire cart, complete.....	10,005.00	9,570.00
Pocket, pommel, service, model of 1912, complete.....	678.00	554.00
Scabbard, bolo, model of 1910, complete.....	96.00	88.00
Saddle, service, model of 1912, complete.....	3,212.00	2,953.00
Glands, 3-inch gun carriages.....	650.00	153.00
Hub liners, 60-inch wheel.....	653.00	475.00
Stuffing boxes, 4.7-inch gun carriage.....	1,445.00	845.00
Stuffing box glands, 4.7-inch gun carriage.....	808.00	447.00
Spade pins, 4.7-inch gun carriage.....	643.00	360.00
Spade keys, 4.7-inch gun carriage.....	810.00	637.00
Elevating bevel pinion, 4.7-inch gun carriage.....	1,013.00	608.00
Elevating bevel gear, 4.7-inch gun carriage.....	1,900.00	1,117.00
Cylinder head, 4.7-inch gun carriage.....	1,224.00	691.00
Brake rod ends, 4.7-inch gun carriage.....	854.00	309.00
Brake spring cover ends, 4.7-inch gun carriage.....	1,225.00	712.00
Brake rod ends, 6-inch howitzer carriage.....	610.00	476.00
Cylinder heads, 6-inch howitzer carriage.....	950.00	550.00
Lunettes, 6-inch howitzer carriage.....	1,854.00	951.00
Piston-rod glands, 6-inch howitzer carriage.....	880.00	516.00
Quick-return pinion, 6-inch howitzer carriage.....	715.00	608.00
Hub liner, 56-inch wheel.....	40.50	8.50

The following table indicates some reductions in costs of artillery vehicles as compared with former costs:

Vehicles.	No.	Date completed.	Cost each.
3-inch gun carriages, model of 1902, complete.....	20	Dec., 1912	\$2,181.99
Do.....	20	July, 1915	2,133.47
4.7-inch howitzer carriage limber, model of 1909, complete.....	16	Feb., 1915	758.48
Do.....	12	do.....	620.18
Do.....	16	July, 1915	608.25
4.7-inch howitzer forge limber, model of 1902.....	3	Feb., 1915	819.77
Do.....	6	Dec., 1915	735.21
4.7-inch howitzer store limbers, model of 1902.....	3	Feb., 1915	780.67
Do.....	6	Dec., 1915	689.91

Savings due to improved methods.—Since the amounts of funds allotted this arsenal for manufacturing purposes are based on the former cost of the articles ordered, the balance of these funds unexpended on completion of the articles ordered is a just measure of the economies in production due to improved arsenal methods, provided the cost of material remains constant. During the past year the cost of material has increased, yet, in spite of this fact, on orders completed during the past year the net savings measured as above indicated aggregate \$417,896.14, or 13.1 per cent of the total allotments involved.

Testing department and drafting room.—In the physical laboratory 3,540 separate tests were made. In the chemical laboratory 2,720 analyses were made. In this laboratory much time has been devoted to the study of leather analysis, and the requirements of the department's leather specifications have, as a result, been made more definite. A total of 588 rounds were fired in proof and experimental tests at the proving ground. The work of the drafting room has been of the same character as in former years.

Saddlers' and Battery Mechanics' School.—About August 1, 1915, 34 enlisted men reported for instruction in the training school for saddlers and 9 for instruction in the training school for battery mechanics. Of this number, 32 completed the saddler's course and 7 the mechanic's course. All of the men who completed the course have been thoroughly instructed in the care and repair of the matériel used in their organizations.

SPRINGFIELD ARMORY.

The armory was commanded during the year by Col. W. S. Peirce.

Grounds and buildings.—The exterior repairs and painting of buildings have been completed during the year, with the exception of the main arsenal building; this last-mentioned work is now in progress. An appropriation of \$7,200 for the repair of Federal Street became available on July 1, 1915. This was performed, under contract, during July and August. As examination has shown that the base was extremely uneven and entirely too thin in many places, the whole roadbed was torn up, graded, and an even, thoroughly rolled base of crushed stone applied. Upon this a hard surface of crushed stone with asphaltic bond, known as "Topeka" surface, was placed. This surface differs from the "Warrenite" process applied in the previous year to Pearl Street, chiefly in the grading of the stone used. Both Pearl Street and Federal Street are now in very satisfactory condition, and no evidences of wear are yet perceptible. The sundry civil appropriation act approved July 1, 1915, carries an appropriation of \$7,200 for repairs of streets, under which appropriation the repair of Lincoln and Magazine Streets, which are in very bad condition, will be undertaken. Byers Street will then be the only remaining street in urgent need of repairs.

An appropriation of \$14,500 for the construction of new coal bins and installation of coal-handling machinery at the Hill Shops became available on July 1, 1915. The work was performed by contract during the past year. The bins are constructed entirely of reinforced concrete and, besides giving the storage and handling facilities needed, form a very sightly structure. Coal is now dumped from the cars into the pit, run through the crusher, from which it is taken by an inclined conveyor to a central hopper above the bins. Chutes from this hopper permit the distribution of coal to any bin. A small bin is reserved for ashes, which are dumped into an ash hopper and conveyed to the bin by the coal conveyor.

Manufactures.—The volume of manufacturing and repair work performed at the armory during the past year was less even than during the year preceding. It was accomplished also under the additional handicap of a continual loss of experienced employees

throughout the year and a reduction of one in the number of officers assigned to this establishment.

The principal articles manufactured or repaired, and the respective quantities of each, are as follows: United States rifles, caliber .30, model of 1903, 11,299 manufactured, 6,662 repaired; 1,811 star-gauged manufactured, 304 repaired; 518 specially selected and star-gauged for the national matches manufactured, 6 repaired; gallery practice rifles, caliber .22, model of 1903, 272 manufactured, 356 repaired; knife bayonets, model of 1905, 15,649 manufactured; automatic pistols, caliber .45, model of 1911, 4,966 manufactured, 996 repaired; bolos, model of 1910, 2,500 manufactured, 124 repaired; bolo-bayonets, model of 1915, 3,200 manufactured; noncommissioned staff officers' sabers, 1,000 manufactured; scabbards for noncommissioned staff officers' sabers, 1,000 manufactured; fencing muskets, 1,450 manufactured; fencing-sword blades, metal, 126 manufactured; fencing-saber blades, metal, 153 manufactured; pistol-cleaning kits, model of 1912, 233 manufactured; armorer's tool chests, complete, 9 manufactured; sets of tools for securing front sight, 200 manufactured; 3-inch shrapnel heads, 7,511 manufactured; 3.8-inch gun shrapnel heads, 5,924 manufactured; 4.7-inch gun shrapnel heads, 8,748 manufactured; 3-inch shrapnel diaphragm, 151,369 manufactured; 3.8-inch shrapnel diaphragm, 3,605 manufactured; 4.7-inch shrapnel diaphragm, 1,500 manufactured; diaphragm forgings for 4.7-inch shrapnel, 1,800 manufactured; automatic machine rifles, caliber .30, model of 1909, 153 manufactured; Colt's automatic machine guns, caliber .30, 39 repaired; Maxim automatic machine gun, caliber .30, model of 1904, 7 repaired; United States magazine carbines, caliber .30, model of 1899, 144 repaired.

Issues, receipts, and sales.—The total weight of stores issued was 943,414 pounds, and of those received, 475,567 pounds; 5,517 net tons of coal and 1,180 net tons of other manufacturing supplies and materials were received. The transportation of this property was covered by 825 bills of lading for issues and 331 for receipts. The values of the issue of spare parts and accessories for the rifle to the service, the National Guard, and the Navy and Marine Corps, were as follows: Army, \$16,975.91; National Guard, \$9,121.42; Navy and Marine Corps, \$20,647.31; a total of \$46,744.64. Issues of parts for the automatic pistol, caliber .45, model of 1911, were made as follows: Army, \$2,488.45; National Guard, \$602.15; Navy and Marine Corps, \$724.36; a total of \$3,814.96. Issues of parts for the automatic machine rifle, caliber .30, model of 1909, were made as follows: Army, \$24,006.60; National Guard, \$17,751.18; Navy and Marine Corps, \$4,424.30; a total of \$46,182.08.

Sales of arms, etc., have been far in excess of previous years. The material increase in this work is indicated by the fact that the value of the sales for this year is \$59,907.12, as compared with \$26,845.78 for last year.

Inspection of outside manufactures.—During the past year the inspection of articles manufactured at Hartford, Lowell, and Utica has been made from this armory, and up to the month of October last, in addition to the above, those under manufacture at Bridgeport and Worcester. The total value of all material inspected was \$334,886.77.

Experimental work.—Two types of motor cycle with side car and machine-gun mount have been developed, and a limited number of each type have been manufactured and issued for test. A unit of each type consists of one motor cycle with side car and machine-gun mount, three motor cycles with side car and ammunition carrier, and one motor cycle with side car for the commander of the unit.

The necessary dies, tools, fixtures, jigs, and gauges for the manufacture of the bolo bayonet, model of 1915, have been completed, and 3,200 of these bayonets have been finished and turned into store.

An automatic pistol, caliber .22, firing the caliber .22 short cartridge, has been designed, and six have been manufactured and tested. The results of the tests were satisfactory, and the manufacture of an additional number of these pistols is contemplated.

Course of practical instruction.—In the spring of the present year a course of instruction was inaugurated with a view of providing a total of 14 employees who should have the training and experience to qualify them for detail as instructors or demonstrators of machine guns. It is believed that the policy of instruction of machine-gun personnel foreshadowed by the direction to form a body of practical instructors is a most important one, but that the desired success in the use of machine guns will not be fully realized until the machine-gun service shall have been made and organized as a distinct branch of the line and its officers and noncommissioned officers thoroughly instructed at permanent schools corresponding to those pertaining to the Field Artillery and Cavalry.

FRANKFORD ARSENAL.

During the fiscal year this arsenal was commanded by Lieut. Col. George Montgomery.

Fiscal and property transactions.—The estimated value of ordnance property, the manufacturing orders for which were completed during the year, amounted to \$4,120,611.34. The value of the ordnance property covered by manufacturing orders which had not been completed at the expiration of the fiscal year 1916 amounted to \$3,720,000. The amount disbursed during the year was \$3,799,151.77, and the corresponding number of money vouchers was 9,380. The weight of the property shipped during the year was 19,284,534 pounds and the weight of the property received during the year was 40,827,627 pounds; the corresponding number of property vouchers was 7,800. The minimum authorized stock at the end of the fiscal year 1916 was \$957,335.19, and the amount of the stock fund returned to credit of appropriations pertaining to the Ordnance Department by means of the utilization of surplus property and scrap amounted to \$288,006.53. The amount similarly returned during the preceding year was \$198,868.23. The average number of employees during the year was 2,001, and the average amount of each monthly pay roll was \$118,502.78. The value of the ordnance property completed during the year increased about 1.9 per cent over the fiscal year 1915 and about 50 per cent over the fiscal year 1914. The disbursements, however, were about 20 per cent less than those for the fiscal year 1915 and 0.8 per cent less than those for the fiscal year 1914.

Administrative methods.—During the year the number of civilian guards or watchmen was considerably increased, and manuals were prepared prescribing the duties of guards and watchmen for the safety of the public buildings and for more efficient fire protection. During the year it was found advisable to place all the inspectors in each of the manufacturing shops under the direct supervision of the officer in charge of each department, and as a result of this arrangement it is thought that a better quality of product will be produced.

The various overhead expenses have been scientifically distributed throughout the year, such distribution being on a rate per hour given to each machine or appliance used in connection with the productive work; but while such distribution of overhead expenses without doubt is excellent and thoroughly equitable to every cost, the use of the system has developed the necessity of frequent revisions to meet changing conditions.

Shop management.—The system of shop management inaugurated about five years ago in connection with the manufacture of small-arms ammunition, and which system was subsequently extended to the manufacture of artillery ammunition, etc., has been entirely satisfactory, and, excluding the increase in the cost of materials during the fiscal year 1916, the savings which may be attributed almost entirely to such improved shop management, have been considerable. Briefly, it may be stated that the aggregate savings in the manufacture of small-arms ammunition, artillery ammunition, and sights, instruments, etc., since the introduction of scientific shop management, have amounted to approximately \$1,865,966.89. Furthermore, the savings made by the utilization of surplus stock and scrap have aggregated during the past four years, and since the establishment of the stock fund, the sum of \$1,447,388.07.

The premium and bonus systems of compensation at the arsenal were abolished by act of Congress, and notwithstanding reports to the contrary, every employee engaged in the manufacture of small-arms ammunition or in the assembling of artillery ammunition who was paid under this system, was perfectly satisfied therewith. The real objectors to the premium system of compensation on the part of the employees of this arsenal were almost entirely those who did not enjoy the benefits thereof.

Much work was done during the year in providing for storing and issue of tools, fixtures, etc., in the various shops at the arsenal, and in providing adequate supplies thereof, and the appropriate records to show whether or not the situation in each shop in respect to tools and fixtures was satisfactory. There is no doubt that a great saving can be effected in costs of manufacture when tooling is properly and appropriately provided for in advance of manufacturing orders.

The only orders of any magnitude given to outside manufacturers during the year were for the machining of 3-inch high-explosive shell, and, owing to the fact that no orders were completed at the arsenal for similar machining, a comparison of costs can not be made.

Manufacture of small-arms ammunition.—The principal articles of small-arms ammunition manufactured during the year were 48,416,540 ball cartridges, caliber .30, model of 1906; 9,595,260 pistol ball cartridges, caliber .45, model of 1911; 2,030,260 blank cartridges, caliber .30, model of 1905; 7,300 special ball cartridges, caliber .30;

300,000 guard cartridges, caliber .30, model of 1906; and 101,180 dummy cartridges, caliber .30, model of 1906. The accuracy of rifle ammunition has been maintained throughout the year, although, due to the difficulty of obtaining cartridge metals of the desired standard, the accuracy was impaired at certain intervals. Considerable work was done during the year in preparing the small-arms ammunition department for manufacturing during the coming year on a much larger scale than has heretofore been done. The appropriate increases of tools and fixtures to meet this condition have been made, while numerous installations of lighting have been made in the shops to provide for night work. Experiments have been conducted during the year which indicate that steel may be substituted for cupronickel in the manufacture of bullet jackets. The experiments, however, have been limited and do not demonstrate that, when manufactured in quantity, such bullet jackets would be satisfactory.

The savings made in the manufacture of small-arms ammunition during the year, as compared with the cost of the same ammunition prior to the introduction of improved shop management, was \$205,611.34. There was, however, due to a great increase in the cost of materials, an actual loss in the manufacture of small-arms ammunition, as compared with the preceding year, of \$132,522.75. The average appropriation cost of rifle ammunition during the year was \$24.32 per thousand, as compared with \$22.15 per thousand for the preceding year. There was, however, an increase in the cost of material per thousand cartridges of \$3.37, as compared with the cost of the same material for the preceding year. The cost of pistol ball cartridges, caliber .45, was \$14.52 per thousand, as compared with \$11.58 per thousand for the preceding year; much of this increase is due to the increase in cost of material, which amounted to \$2.39 per thousand.

Manufacture of instruments.—The principal output of sights, instruments, etc., during the year consisted of elevation quadrants for 12-inch mortar carriage; 3-inch telescopic sights; observation telescopes, Pratt range boards; Warner & Swasey azimuth instruments; Whistler-Hearn plotting boards; deflection boards; sights for 2.95-inch mountain gun carriage; sights for 4.7-inch howitzer carriage; balloon sights; front sights for 3-inch gun; rear sights for 3-inch gun; sights for 6-inch howitzer carriage; rear sights for 4.7-inch gun carriage; range quadrants; panoramic sights, hand fuze setters; testing levels; battery commander's rulers, etc. There has been a very rigid inspection of finished sights, instruments, etc., and a high standard of quality has been maintained in the output of these articles. A consistent effort has been made to improve the quality of the various instruments by recommending changes in drawings whenever it became evident by reason of frequency of repair or failure to function properly that an improvement could be made.

The cost of sights, instruments, etc., manufactured at the arsenal shows a saving of \$9,008.21, as compared with the costs prior to the introduction of improved shop management, but there was, however, an increase in their cost during the fiscal year 1916, as compared with the preceding year, of \$2,385.31, which was due to the great increase in wages of machinists and instrument makers engaged on this class of work.

Manufacture of artillery ammunition.—The principal output of artillery ammunition during the year consisted of 145,498 fixed common shrapnel for 3-inch field gun; 9,606 common steel shell for 3-inch field gun; 8,004 unfixed common shrapnel for 3.8-inch howitzer; 3,914 fixed common steel shell for 4.7-inch gun; 988 semifixed common steel shell for 4.7-inch howitzer, model of 1913; 6,699 unfixed common shrapnel for 4.7-inch howitzer; 3,893 fixed common shrapnel for 4.7-inch gun; 2,176 semifixed common shrapnel for 4.7-inch howitzer; 1,504 unfixed common shrapnel for 6-inch howitzer; 1,933 unfixed common steel shell for 6-inch howitzer; and 11,047 smoke shell for 1.457-inch subcaliber gun. There were also completed 7,279 45-second combination fuzes; 300 sensitive point fuzes; 3,248 hand grenades; and approximately 450 each of dummy hand grenades and dummy rifle grenades.

The manufacture of artillery ammunition during the year showed a saving over the costs prior to the introduction of improved shop management of \$398,955.64, and, notwithstanding the increase in wages and in the cost of material, there was an actual saving in its cost over that of the preceding year of \$64,693.80, although much of this saving was due to the purchase of materials prior to the great advance in their cost. There has been marked improvement in the quality of the combination fuzes manufactured during the latter part of the year. These fuzes have a powder time train and therefore do not lend themselves to high angle firing and high muzzle velocity conditions. A clockwork mechanical time fuze offers a solution of this problem, and contracts have been made with two leading watchmakers for the development of a suitable clockwork system with a running time of about 45 seconds.

The manufacture of shell ammunition has been undertaken in large quantities; but it has been difficult to obtain satisfactory forgings from the various contractors, which is in part responsible for the limited output of this class of ammunition. The machinery of the arsenal formerly adapted for the manufacture of shrapnel was altered to manufacture shell, but it is probably not as satisfactory as machinery built expressly for shell making. High-explosive shrapnel have not yet been manufactured satisfactorily in quantity, although the design when followed appears to meet all requirements except in respect to premature bursts of the shrapnel head in flight on the time action of the shrapnel proper. Contracts have been made for high-capacity shell, and detonating fuzes are being developed therefor. Fuze seat liners have been adopted for detonating fuzes for seacoast projectiles. A 2-wire electric primer has been developed. Considerable development work has been done in connection with rifle and hand grenades, illuminating and incendiary projectiles, night tracers, and drop bombs of various weights.

Manufacturing plant.—There was constructed during the year a tin shop, at a cost of \$72,000; an extension was made of the lumber shed so as to provide for additional manufacture of shrapnel, at a cost \$22,500; an extension was made of the double-action press shop building, to provide additional storage room, at a cost of \$6,000; and mechanical stokers were installed in the power plant, at a cost of \$15,000. All expenditures authorized at the preceding session of the Congress were made except those for additional fire protection,

for which the amount appropriated was inadequate and which led to an additional appropriation of \$24,000 at the session just closed. Considerable machinery was purchased for the new tin shop, and a limited amount for the manufacture of artillery ammunition.

General improvements.—The Pennsylvania Railroad Co. has reconstructed, for a distance of about 600 feet, the sea wall along the Frankford Creek, which sustains the embankment upon which its tracks reach the arsenal. Vacuum heating mains and return lines were installed to the extent of about \$5,500, so that the vacuum system of heating has been practically completed in so far as the manufacturing plant is concerned. A new automatic telephone system has been installed at a cost of about \$3,000.

Advance in labor and material.—The year was marked by great advances in the wages of employees at the arsenal, and a further increase of wages is contemplated at the date of writing this report. The most noted increases have been of machinists and toolmakers to the extent of 20 per cent; of instrument makers to the extent of 47 per cent; of automatic screw makers to the extent of 16 per cent; of machine operators to the extent of 20 per cent; and of assistant foremen to the extent of 35 per cent. The cost of materials has been even more marked. Pig antimony advanced 621 per cent; high-speed steel, 573 per cent; optical glass, 416 per cent; trinitrotoluol, 266 per cent; Tobin bronze, 200 per cent; cartridge brass, 145 per cent, etc. Marked economies and dispatch in manufacture can not be obtained under such conditions.

WATERVLIET ARSENAL.

This arsenal was commanded during the year by Col. W. W. Gibson, who is also a member of the Board for Testing Rifled Cannon.

Operating department.—The gun manufacturing plant was operated during the year with an average of about 87 per cent of the shop employees on the first shift, about 10 per cent on the second, and about 3 per cent on the third. Due to a decrease in the amount of available work, the average force of employees during the year was approximately 25 per cent less than the average during the preceding year. The following is a summary of the most important items completed: Army cannon—four 14-inch guns, twelve 12-inch mortars, four 3-inch (15-pounder) guns, nine 4.7-inch howitzers with pedestal mounts, four 3.8-inch field howitzers, six 4.7-inch field howitzers, and ten 6-inch field howitzers. Navy guns, five 14-inch guns and five 6-inch guns. Other important items of work completed include the relining of five large caliber Army seacoast guns and two 12-inch Navy guns, and the manufacture of breech mechanisms of an improved type for seventy-three 3-inch (15-pounder) seacoast guns. There remain under manufacture the following numbers and types of cannon: Four 14-inch seacoast guns, 150 mobile artillery cannon, from 3-inch to 4.7-inch in calibers, and 53 Navy guns, from 4-inch to 6-inch calibers.

Number of employees.—On June 30, 1915, the arsenal had 424 employees. Due to extraordinary demands for munition workmen elsewhere, many skilled workmen resigned, but these have been replaced by new men so that the number now employed is practically the same, namely, 422. Unless there is a general change in labor con-

ditions, difficulty is anticipated in promptly expanding the force to meet the needs under the large orders resulting from largely increased appropriations.

New machine tools.—There has been procured and is being installed a large boring and turning lathe of sufficient capacity for the manufacture of the largest guns now proposed—the 16-inch, 50-caliber guns. Congress has not only provided funds for modifying the large gun shop to make it otherwise suitable for this work, but also for additional machine tool equipment sufficient to double the present capacity for the manufacture of the largest caliber guns.

Wage readjustment.—In December, 1915, the wages of all shop employees were readjusted to conform to those paid by commercial firms in the vicinity. This readjustment was made on the basis of data collected by a committee composed of one of the assistant officers at the arsenal and one of the machinists, elected by the shop employees. This readjustment involved a general increase in the wages of the various classes of employees to meet similar increases found to have occurred in the more important plants in the vicinity.

Planning room.—There have been compiled in the planning room card records indicating the times taken to perform all important steps in the work of gun manufacture under various orders covering a period of about five years. Similar records of current work as completed are being entered for ready comparison, to serve as an indication of relative efficiency. There has been installed in this connection a merit record system which provides for recognition of work done in an especially expeditious or economical manner. This serves as the basis for raising a workman's efficiency rating, thus placing him in a position to secure higher pay.

Instruction sheets.—There has been adopted a system of instruction sheets to be furnished workmen with every important job. These give a list of the tools and fixtures required, and specify in detail the steps to be taken in executing the work. These instruction sheets are prepared by highly skilled mechanics, thus insuring the most expeditious and economical methods of doing the work. As their use becomes more extended there is expected to result a material lowering of costs.

Costs of manufacture.—Costs of manufacture under orders completed for the year show, with few exceptions, a gratifying downward tendency. This is ascribed to the improvements in the details of the system of shop management, and to more normal working conditions in that the fluctuation in the size of the force has been less marked than during the previous years.

Power plant.—To meet the increased demands for power, a new 250-kilowatt motor-generator set, together with the necessary switchboard panels, have been procured and are being installed in the central power plant. This will serve to meet present needs and provide a reserve for future expansion in the machine tool equipment taking power from this plant. The old switchboard is being moved to a new location, and other changes are being made which will greatly improve the general arrangement of the power plant. Three of the six large boilers for steam production have been extensively repaired during the year, thus putting this part of the plant in excellent condition.

Disbursements.—The total disbursements for this establishment amounted to approximately \$741,675, this amount being about equally divided between expenditures for material and those for labor.

WATERTOWN ARSENAL.

This arsenal was commanded during the year by Col. C. B. Wheeler, who is also the armament officer of the Northern Armament District, and a member of the Board for Testing Rifled Cannon.

The principal operations have comprised the manufacture of sea-coast gun carriages, armor-piercing and deck-piercing shell, and parts required for the alteration and repair of carriages already in the service. The amount of work done during the year, as measured by total expenditures, has been somewhat less than that of the previous year. The total number of employees at the end of the year was 615.

Field artillery ammunition.—During the past year the arsenal has continued the manufacture of the larger calibers of field artillery projectiles. The equipment of the arsenal is more suited to these larger calibers than it is to the 3-inch projectiles previously manufactured. Manufactures during the year included 4.7-inch common steel shell, 4.7-inch common steel shrapnel, and 6-inch common steel shell. For the manufacture of this class of ammunition some additional machines were installed during the year, but under the best conditions the shop is not suited to the manufacture of field artillery projectiles in any large quantity without very considerable rearrangement.

Projectile shop.—This shop is used for the machine operations on all seacoast projectiles. Its capacity, working two shifts, is approximately 2,500 12-inch projectiles per year. During the past year there has been installed a motor-driven hydraulic press for testing projectiles. Appropriations having been made by Congress for increasing the capacity of this shop, it is proposed to hereafter do all the work required in the manufacture of projectiles therein.

Power plant.—In connection with the construction of the new press shop for seacoast projectiles, the boiler capacity of the power plant has been increased by the installation of four 185 horsepower Keeler water-tube boilers and accessories. This boiler capacity will be ample for the 2,000-ton forging press now installed and such smaller presses as may be necessary.

Improvements.—Improvements in manufacturing plant have been made as funds permitted. During the past year new tool rooms have been built, tools classified, and the double-check system installed in the foundry, smith shop, and erecting shop. In the establishment of these tool rooms it was found practicable to make a considerable reduction in the kinds and quantities of various tools kept on hand. A new 20-inch motor-driven engine lathe, and a 21-inch turret lathe have been installed in the machine shop during the year.

Principal output.—The following gun carriages, projectiles, etc., were completed: Ten-inch dummy disappearing carriages, model of 1912; 14-inch disappearing carriages, model of 1907 M1; 16-inch disappearing carriage, model of 1912; 1-pounder balloon gun mount, model E; 15-pounder balloon gun mounts, model of 1916; 4.7-inch

howitzer carriages, model of 1910; 6-inch barbette carriages, model of 1910; ammunition trucks for 12-inch mortar carriage, model of 1896 MIII; sets of parts for modification of 15-pounder barbette carriages, model of 1898; 3-inch shrapnel cases; 4.7-inch common steel shell, model of 1905; 6-inch armor-piercing shell; 12-inch mortar, 1,046-pound, deck-piercing shell; 12-inch, 700-pound, deck-piercing shell; 12-inch, 700-pound, armor-piercing projectiles; 6-inch armor-piercing projectiles; and 10-inch, 12-inch, and 16-inch cast-iron shell.

Testing laboratory.—The number of routine and commercial tests undertaken during the year was somewhat greater than that for the previous year. Among the investigative tests, the following gave particularly valuable results: Examination to determine the cause of the breaking of 14-inch elevating screw; examination of defective 14-inch gun bushing; investigation of the heat treatment of hot chisels and high-speed steel twist drills.

Shop management.—This arsenal has operated under the system of scientific shop management in practice at that establishment for a number of years, except that in accordance with the provisions contained in the Army appropriation act approved March 4, 1915, all time study was discontinued on that date and no premiums have been paid from appropriations carried in that act. Owing to the large amount of standardized data that have been secured in connection with the system of management, it has been possible to continue rate-setting, without any considerable difficulty, without the use of time study.

NEW YORK ARSENAL.

This arsenal was commanded during the year by Col. O. B. Mitcham, who also performed the duties of inspector of ordnance, Ordnance officer of the Eastern Department, and armament officer of the Central Armament District.

The arsenal has no special facilities for the manufacture or repair of Ordnance matériel; its principal use is as a purchasing, receiving, and shipping point. From its proximity to New York City its advantages as a purchasing and storage depot are manifest. As a depot for equipping troops, especially for military expeditions in time of war, its location renders it particularly valuable. During the year the Ordnance dock was rebuilt and a steel oil storage house was erected thereon, at a cost of \$20,000, for which purpose funds were appropriated by Congress.

During the year 29,152 packages of stores were received, weighing 1,635,046 pounds. The number of packages issued was 15,721, weighing 2,542,638 pounds. The amount of funds disbursed during the year was \$388,443.41.

AUGUSTA ARSENAL.

This arsenal was commanded during the year by Col. J. W. Benét, who is also armament officer of the Southern Armament District.

The shops have been employed in the manufacture of cast-iron projectiles for target practice cast in the arsenal foundry, the manufacture of targets for seacoast target practice, and in repair and alteration work for the Southern Armament District.

The disbursements for the year, exclusive of sales and deposits, amounted to \$83,567.37. The number of receipts and issues of ordnance stores during the year was 1,353. The stores received on quartermaster's bills-of-lading amounted to 883,192 pounds; the stores issued amounted to 3,704,828 pounds.

BENICIA ARSENAL.

This arsenal was commanded by Lieut.-Col. J. W. Joyes from July 1 to October 20, 1915, and by Maj. H. W. Schull during the remainder of the fiscal year. The commanding officer of this arsenal is also ordnance officer of the Western Department and armament officer of the Western Armament District. This arsenal is the depot of supply for the Regular troops and the National Guard in the Western, and, to a certain extent, Hawaiian Departments, and it is the depot of reserve for Ordnance Supply District No. 5. It has shops equipped for all the usual repairs and for certain manufacturing work. During the year the shops have been engaged principally in the manufacture of propelling charges for seacoast artillery; in overhauling ammunition for field and siege guns; in the manufacture of cast-iron projectiles of 6-inch and 12-inch caliber, of target material for seacoast artillery, mobile artillery, and small arms; and upon the usual repairs and alterations of miscellaneous armament. In addition the small-arms repair shop has overhauled and repaired about 2,854 United States rifles, caliber .30, model of 1903; the cleaning and repairing section has overhauled, cleaned, and repaired a large amount of personal and horse equipment turned in by organizations. During the year a number of minor additions to the equipment of several of the shops were made, and some additional safety and welfare work was completed.

The installation of a new system of high-pressure water mains for increasing the facilities for fire protection was completed during the year. Available funds, however, were not sufficient to permit the purchase and installation of a centrifugal motor-driven pump to supplement this installation.

The disbursements for the year amounted to \$138,538.77, of which about \$26,900 was for manufactures, including the overhauling of ammunition; about \$13,800 for cleaning and repairing arms and equipments; and about \$30,860 for the upkeep of armament. During the year 482 requisitions were received, and 1,451 invoices and 614 bills of lading were drawn to cover issues. The stores received amounted to 4,892,376 pounds; those shipped to 4,616,465 pounds.

SAN ANTONIO ARSENAL.

This arsenal was commanded during the year by Maj. Harry B. Jordan. The commanding officer of this arsenal is also ordnance officer of the Southern Department, and in charge of the maintenance, repair, and alteration of Field Artillery matériel in that department.

The arsenal has supplied ordnance stores and equipments throughout the year to 17½ regiments of Cavalry, 124 regiments of Infantry, and 19 regiments of Artillery. This arsenal constitutes the central

distributing point for the Southern Department, to which matériel in large lots is shipped for subsequent distribution. Its functions are threefold, namely: the supply of troops, the repair and maintenance of field artillery matériel, and the storage of war reserve supplies and equipment.

The sundry civil appropriation act approved July 1, 1916, contains appropriations for a storehouse, for increasing the water supply, and for repairing roadways at this arsenal, all of which were much needed. Work on these projects is now progressing. A temporary storehouse, constructed under authority of the Secretary of War to incur a deficiency obligation for the purpose, was appropriated for in the general deficiency act approved September 8, 1916.

The total weight of stores shipped from this arsenal during the year was 4,533,669 pounds; that of stores received, 4,759,557 pounds. The total expenditures amounted to \$50,600.70.

PICATINNY ARSENAL.

This arsenal was commanded by Lieut. Col. O. C. Horney until July 15, 1915; by Maj. J. C. Nicholls from July 16 to November 9, 1915; and from that date by Lieut. Col. J. W. Joyes. The Army powder factory and high-explosive factory are located at this arsenal, which is also a depot for the storage and preparation of powder, ammunition, and high explosives. Approximately 1,212,000 pounds of cannon powder, 313,000 pounds of caliber .30 powder, and 92,000 pounds of high explosives were manufactured during the year, an increase of about 12 per cent over the production of the preceding year. During the year over 50,000 propelling charges for cannon were assembled or modified, and about 15,000 projectiles modified. An increased amount of experimental work has been carried on in connection with the manufacture of high explosives and powder and in the investigation of extraneous questions.

Due principally to the increased cost of raw materials and of labor, and partly to changes in methods of manufacture to improve the quality of powder, the cost of cannon powder was approximately 39 cents per pound, and that of caliber .30 powder approximately 46 cents per pound, an increase as compared with the cost of the preceding year of approximately 6½ cents per pound and 4½ cents per pound, respectively. These are factory costs and include certain overhead charges only. The year began with the cost of all raw materials markedly higher and the market rising, so that all new contracts made were at still higher prices. Examples are: mixed acid, from \$3.10 to \$6.64; fuming sulphuric, from \$0.725 to \$1.225 (present market, any price from \$5 up); cotton, from \$0.06 to \$0.078; alcohol, from \$0.046 to \$0.079; diphenylamine, from \$0.22 to \$1.0015, etc. Prices are still rising, and in all probability the cost of powder will be still higher next year.

Nearly 4,300,000 pounds of cannon powder, and approximately 875,000 pounds of caliber .30 powder have been manufactured since the factory has been in operation. The operation of the plant for manufacturing high explosives for projectiles has been satisfactory, and its capacity is being increased to approximately 500,000 pounds per year.

Several fires incident to manufacturing and other operations have occurred. There was no loss of property and no loss of life, although four employees were severely burned. Precautions against fires and injury, especially to personnel, have received special attention, some improvements in this respect having been made and others planned.

The total disbursements during the year amounted to \$775,291.22; the number of cash vouchers was 1,618; the number of receipts and issues of stores was 1,070; the weight of stores received and issued, exclusive of materials for manufacturing and building, was 14,233,877 pounds; the number of employees on June 30, 1916, was 408, as compared with 373 at the commencement of the year.

MANILA ORDNANCE DEPOT.

The depot was commanded by Lieut. Col. C. L'H. Ruggles from the beginning of the fiscal year to October 4, 1915, by Maj. G. F. Jenks from October 5 to November 5, 1915, and since the latter date by Lieut. Col. Samuel Hof. The commanding officer of the depot is also ordnance officer of the Philippine Department and armament officer of the Philippine Armament District.

Volume of business.—Eight hundred and twenty-two property returns were received and given preliminary examination, all irregularities being investigated by correspondence. The number of vouchers for stores issued was 1,162; for stores received, 1,388. The weight of stores issued was 3,303,343 pounds; that of stores received, 4,076,596 pounds.

Disbursements.—The total amount of funds disbursed at the depot during the year was \$130,771.78. The sales of ordnance and ordnance stores during the year to officers, the insular government, and other departments amounted to \$23,653.56.

Work at the depot.—The work of the past year has included the repairing of a large quantity of matériel turned in for that purpose, the preparation of propelling charges for seacoast guns, the manufacture of targets and target material for small arms, mobile and seacoast artillery target practice, and of miscellaneous stores for sale and issue. The installation and care of the seacoast armament have added largely to the labor and responsibility of the depot. Increased storage facilities and more efficient fire protection are the most important needs of the depot.

ORDNANCE BOARD.

The membership of the board on June 30, 1916, was as follows: Lieut. Col. C. L'H. Ruggles, Ordnance Department; Maj. Alston Hamilton, Coast Artillery Corps; and Maj. G. G. Gatley, Third Field Artillery. Lieut. Col. Samuel Reber, Signal Corps, is a member on matters connected with aeronautics, and Capt. Thomas M. Robins, Corps of Engineers, is a member on matters involving engineering work. Lieut. Col. T. C. Dickson, Ordnance Department, was a member of the board until August 16, 1915, on which date he was retired under the provisions of the act of Congress approved March 4, 1915. Lieut. Col. C. C. Williams, Ordnance Department, was a member of

archaic and should be changed. Officers so detailed are, as a rule, neither trained in themselves, nor can they train others, and I believe that neither the Signal Corps nor the line of the Army, as a whole, desires this exchange or are benefited thereby. I am, therefore, led to recommend, as urgently as may be possible, the return to the system of permanent appointments of field officers and captains in the Signal Corps. Selection may very properly be made to these permanent grades by examination of officers of the line who have served in the corps as lieutenants, who have proved their value to the corps, and who have made their own decision as to the branch of the service in which to make their careers.

During times of peace the duties of the Signal Corps are extensive and important, but events abroad and in our own Army on the border emphasize the constantly increasing importance of supplying and operating the highly technical apparatus required for maintaining adequate means for collecting and transmitting military information necessary to an army. In order that the most modern methods of performing this duty may be utilized to the fullest extent, every effort must be made to keep informed of advances in science and use made of the discoveries and developments of new means for applying electricity, mechanics, and aircraft to warfare.

The Signal Corps has long been handicapped in the proper performance of its duties by the lack of an adequate personnel. This situation has, however, been partially relieved by increases in men and officers of the corps under the national-defense act of June 3, 1916. Under this act, the Signal Corps will ultimately have, when all five increments have been authorized, a commissioned strength of 1 chief signal officer, with the rank of brigadier general, 3 colonels, 8 lieutenant colonels, 10 majors, 30 captains, and 75 first lieutenants, while the aviation section of the corps will have a commissioned strength of 1 colonel, 1 lieutenant colonel, 8 majors, 24 captains, and 114 first lieutenants. The enlisted strength of the corps will be fixed by the President. The number of master signal electricians will be 2 per cent of the total authorized enlisted strength of the entire corps; the number of sergeants, first class, will be 7 per cent; the number of sergeants, 10 per cent, and the number of corporals, 20 per cent. The grade of horseshoer has been added to the Signal Corps, and under the Army appropriation bill, approved August 29, 1916, the number of privates, first class, will be 45 per cent and the number of privates 9 per cent.

The first increment added 1 colonel, 1 lieutenant colonel, 1 major, 3 captains, and 11 first lieutenants to the Signal Corps proper, and 1 major and 16 other aviation officers to the aviation section, so that on July 1 of this year the authorized commissioned strength of the Signal Corps was as follows:

SIGNAL CORPS PROPER.

Brigadier general and chief signal officer.....	1
Colonels.....	2
Lieutenant colonels.....	3
Majors.....	7
Captains.....	21
First lieutenants.....	29

AVIATION SECTION.

Major	1
Captains	11
First lieutenants	65

The President has fixed the enlisted strength of the Signal Corps to become effective July 1, 1920, when all five increments will be available, at 4,000 men, the number in each grade being as follows:

Master signal electricians	80
Sergeants, first-class	280
Sergeants	400
Corporals	800
Cooks	88
Horseshoers	36
Privates, first-class	1,853
Privates	463

The increases authorized for the first increment, which became effective July 1, 1916, were 6 master signal electricians; 27 sergeants, first class; 46 sergeants; 113 corporals; 16 cooks; 16 horseshoers; 225 privates, first class; and 57 privates, so that the Signal Corps, including the aviation section, now has with the increases authorized under the first increment added to its previously authorized strength, an authorized enlisted strength of—

Master signal electricians	54
Sergeants, first class	171
Sergeants	214
Corporals	347
Cooks	48
Horseshoers	16
Privates, first class	859
Privates	269

ORGANIZATION OF THE SIGNAL CORPS.

It is proposed to organize this force into two field battalions (less outpost companies); 2 telegraph battalions; 1 depot battalion; 1 wire company; 2 radio companies; 4 depot companies; 3 platoons of a telegraph company; 2 aero squadrons; 2 aero companies; and a school detachment for duty at the Signal Corps Aviation School at San Diego, Cal. There were organized at the end of this fiscal year 4 field companies, 1 radio company, 2 telegraph companies (less 2 platoons); 1 aero squadron; 1 aero company, and 6 depot companies. These organizations will be expanded into the units proposed.

The field and telegraph battalions will be stationed in the United States and will be organized from signal troops now serving in the Southern Department. A wire company and a platoon of a telegraph company will be stationed in the Philippine Department, while a radio company and a platoon of a telegraph company will be stationed in the Hawaiian Department and in the Canal Zone.

The depot battalion will be assigned to duty in connection with the operation and maintenance of the Washington-Alaska Military Cable & Telegraph System, and will be organized from the two depot companies now on that duty. The four depot companies will be stationed in the United States, one company in each territorial department. The personnel of these companies will be used for sup-

plying the men needed for detached service at posts and depots, such as radio and telegraph operators, telephone men, clerks, etc., for furnishing radio operators for service on transports, and for duty in connection with the instruction and training of recruits at Signal Corps schools for enlisted men.

Two of the aero squadrons will be organized and stationed in the Southern Department; one aero company will be assigned to the Philippine Islands and one to the Canal Zone.

Field battalions have been authorized, with a few minor changes as to the number of men allowed in the various grades, practically the same as recommended in my last report. The battalion is organized for duty with a division and is intended to furnish the communication that knits the division into a whole. It is commanded by a major, with a first lieutenant as battalion adjutant and supply officer; a sergeant major and battalion supply sergeant, both having the rank of sergeant, first class; a color sergeant and clerk, each of the grade of sergeant; 9 privates for duty as drivers and orderlies; 1 wire company; 1 radio company; and 1 outpost company; each company having a strength of 1 captain, 2 first lieutenants, and 75 enlisted men. The enlisted personnel, by grades, of each company is as follows:

	Wire company.	Radio company.	Outpost company.
Master signal electricians.....	1	1	1
Sergeants, first class.....	5	6	3
Sergeants.....	7	9	5
Corporals.....	12	15	14
Cooks.....	2	2	2
Horseshoers.....	1	1	1
Privates, first class.....	39	35	37
Privates.....	8	6	12

The wire company is organized into two platoons of two wire sections each and is equipped for establishing buzzer communications for the four combat lines to the brigades. Its transportation and equipment consists of 6 wire carts and 1 instrument wagon, and it has 65 riding horses, 12 draft horses, and 4 draft mules.

The radio company is organized into four radio pack sections and one wagon radio section. The pack sections are intended to provide constant communication with divisional cavalry or supply trains and for any other necessary communication where the laying of wire is impracticable. The wagon set is to be used for communication with other divisions, field Army headquarters, and the base. The company has assigned to it 5 pack sets, 1 wagon set, 1 instrument wagon, 70 riding horses, 4 draft horses, 4 draft mules, and 12 pack mules.

The outpost company has not yet been organized, but the Tables of Organization contemplate that it shall be organized into four platoons, one to each brigade for the necessary interior communication within the brigade. It will be supplied with 1 instrument wagon, 18 riding horses, 4 draft mules, and 4 pack mules.

The telegraph battalion is intended for service with a field army corps, and is organized to maintain communication between the inte-

rior and the field army corps or to connect the headquarters of the field Army with its component parts. It is commanded by a major, with a first lieutenant as battalion adjutant, and a first lieutenant as supply officer; a sergeant, first class, as battalion sergeant major; a sergeant as battalion supply sergeant; three privates as drivers and orderlies, and two telegraph companies of 100 enlisted men each.

The organization of a telegraph company has been materially changed and its personnel greatly reduced since my last report. The number of sections has been reduced from six to four, so that its present organization consists of four sections, two telegraph and two telephone. The personnel of a telegraph company is 1 captain; 2 first lieutenants; 2 master signal electricians; 8 sergeants, first class; 11 sergeants; 17 corporals; 2 cooks; 1 horseshoer; 48 privates, first class; and 12 privates. Its transportation and equipment consists of 4 lance trucks, 2 telegraph wagons, 4 telephone wagons, 2 repair wagons, and 3 field wagons. It has 39 riding horses and 60 draft mules.

An aero squadron is required for service with each division, or when divisions are operating as parts of a field army corps the squadrons may be detached from divisions and grouped under the immediate control of the field Army commander. The recommendation in my last report that aero squadrons of 12 machines be the basis of our organization has been approved, and existing Tables of Organization provide for three companies of four machines each for a squadron. A major will be in command of the squadron, with a first lieutenant as squadron adjutant and quartermaster; 2 master signal electricians; 2 sergeants, first class; 6 corporals; and 2 privates, first class, for duty with the headquarters and supply detachments. Each aero company has an authorized strength of 1 captain; 5 first lieutenants; 1 master signal electrician; 2 sergeants, first class; 5 sergeants; 9 corporals; 2 cooks; 14 privates, first class; and 6 privates.

The restrictions as to the age, rank, and marital condition of officers detailed in the aviation section, imposed by the act creating the aviation section, approved July 18, 1914, were removed under section 13 of the national defense act of June 3, 1916, as recommended in my last annual report. and, contrary to earlier expectations, it is now believed that with these restrictions removed little trouble will be experienced in obtaining sufficient officers from the line to fill the vacancies existing in the aviation section. Under the law as now constituted, it will also be possible to obtain sufficient officers of the proper age and experience to command the squadrons to be organized and for the necessary administrative work incident to the development of this service.

The act of June 3, 1916, also wisely made provision for the appointment of civilian aviators in case sufficient officers should not be available to fill existing vacancies. These aviators will have the base pay of \$150 per month and the allowance of a master signal electrician. So far as can be seen at this time, it will not be necessary to appoint any aviators from civil life, unless additional increments are authorized for the aviation service, as sufficient officers of the line have already applied for aviation duty to fill all vacancies. At the present time there are 39 officers detailed in and 46 students attached to the aviation section, while the first increment authorizes a strength of 77 officers.

OFFICERS' RESERVE CORPS AND ENLISTED RESERVE CORPS.

Among the most important sections of the national defense act are those authorizing the organization of the Officers' Reserve Corps and the Enlisted Reserve Corps. It is considered most desirable that the Officers' Reserve Corps and the Enlisted Reserve Corps be developed to the fullest possible extent. By doing so, it is believed a body of experienced technical men can be organized and trained in times of peace and be available for service in times of need. Every encouragement will be afforded to applicants for appointment in the Signal Officers' Reserve Corps, and real efforts will be made to enlist as large a number of men as possible for the Enlisted Reserve Corps.

During the present period when aviation is used so extensively in modern warfare, the desirability of having a reserve of experienced aeronautical men for service with the aviation section of the Army in case of war needs no argument. As there are comparatively few men in this country skilled in this art, it is all the more important that a large reserve be trained and that every facility and encouragement be afforded men desiring to perfect themselves in this work. This office has therefore obtained authority for an Officers' Reserve Corps and an Enlisted Reserve Corps for the aviation section in numbers and grades as follows:

OFFICERS' RESERVE CORPS.

Majors	16
Captains	48
First lieutenants	232

ENLISTED RESERVE CORPS.

Master signal electricians	40
Sergeants, first class	140
Sergeants	200
Corporals	400
Privates, first class	305
Privates	915

In view of the time required for becoming a skilled flier and the comparatively few opportunities and facilities afforded throughout the country for obtaining this training, this office purposes to call members of these reserve corps, with their consent, into active service a considerable period during the coming year. It is also purposed to utilize the civilian aviation schools of the country in training desirable applicants for service in the Officers' Reserve Corps, and that these schools will be compensated for each reservist undergoing instruction.

If this plan is successful, it is believed the reserve of officers and men for aviation duty will be put on a practicable basis which, in due course, could supply the country with an efficient reserve of flying men in case of need.

OPERATIONS OF THE SIGNAL CORPS IN ALASKA, THE PHILIPPINE ISLANDS, HAWAII, CANAL ZONE, AND THE UNITED STATES.

ALASKA.

The Washington-Alaska Military Cable & Telegraph System is now composed of 2,626.8 statute miles of submarine cable, 848 miles of land lines, and 52 offices, including 10 radio stations.

There were 24 interruptions on the submarine cables during the year, the most serious one being that of the Sitka-Valdez cable from January 30 to March 8, 1916. The delay in effecting repairs to this cable was due to the fact that the cable ship was undergoing repairs which were not completed until the latter part of February. Business was routed during interruptions via naval radio stations and Fort Egbert and the Dominion lines. Some delay was experienced in the handling of this business. This has been corrected by an arrangement with the naval radio service under which a sufficient force of trained operators of the Signal Corps were transferred to the Sitka and Cordova naval radio stations to assist in the handling of the traffic through these stations during interruptions to the trunk cables.

The total "this line" receipts during the year were \$159,819.74, a decrease of \$17,415.01. The "other line" receipts, which were credited and paid to connecting lines, amounted to \$29,162.94, an increase of \$8,660.98, as compared with last year. The value of all official messages, computed at regular commercial rates, aggregated \$194,571.01, an increase of \$78,031.18. Telegraphic money transfers to the value of \$59,669.02 were effected, giving a revenue of \$741. There were no losses to the Government in the handling of these funds.

An all-night service at Seattle, Sitka, Juneau, Valdez, and Fairbanks was established on February 18, 1916, and in July, 1916, the Nome radio station was made a continuous (24-hour) service station.

It has been recognized for some time that the rates on the Alaskan system should be revised, and in view of the numerous requests from commercial bodies, firms, and others in Seattle and Alaska, the Secretary of War on July 1, 1916, upon the recommendation of the Chief Signal Officer, directed a general revision and reduction, effective as soon as practicable. The new rates will become effective on October 1, 1916, and the reductions will range from 15 to 50 per cent. The plan of having several offices in one zone, or square, similar to the method adopted by commercial telegraph companies and the parcel post, was followed in this revision as far as practicable.

FIRST SECTION.

The condition of the telegraph lines from Valdez to Fairbanks, comprising the first section, have been satisfactory during the past

year. The interruptions for the entire year totaled 9 days and 10 hours. The longest was 4 days, due to one of the severest storms in the history of that section. The other interruptions were caused by forest fires.

A motor generator equipment, eliminating all local and main line batteries, was installed on this section last September and has given excellent service. A cable recorder has been installed in the naval radio station near Cordova, thereby permitting business being handled direct between the radio station and Valdez, Seward, or Cordova proper, eliminating extra handling of messages and the necessity for an additional operating force at Cordova during cable interruptions. During such interruptions, three men are sent from Valdez to the naval radio station at Cordova to assist the personnel of that station.

The usual necessary work of replacing old and worn out poles and such other repairs necessary in the proper maintenance of the lines have continued during the year.

The storehouse at Valdez and the station buildings at Hogan were destroyed by fire during July and December, respectively. Funds have been allotted and new buildings are now in the course of construction. Modifications and additions were made to the station buildings at Richardson and Salcha.

The following table shows the stations and distances of the land, cable, and radio portions of the Alaskan telegraph system:

Stations.	Inter- mediate.	Total.
Valdez-Nulato:	Miles.	Miles.
LAND LINES.		
Valdez.....	0	0
Wortmans.....	18	18
Salina (relief cabin).....	14	32
Beaver Dam.....	10	42
Stewart Creek (relief cabin).....	6	48
Telkhell.....	4	52
Kimball Pass (relief cabin).....	14	66
Tonsina.....	14	80
Copper Center.....	23	103
Gulkana.....	25.5	128.5
Hogan.....	27	155.5
Paxson.....	35	190.5
Paxson (relief cabin).....	11	201.5
McCallum.....	6	207.5
McCallum (relief cabin).....	18	225.5
Donnelly.....	16.5	242
Dome (relief cabin).....	8	250
Beal's Cache (no station).....	10	260
McCarty.....	18	278
Shaw Creek (relief cabin).....	12	290
Richardson.....	9	299
Overland (relief cabin).....	19	318
Salcha.....	18	336
Salcha (relief cabin).....	15	351
Fairbanks, radio station.....	18.5	369.5
Fairbanks, city office (end of first section).....	.5	370
Chena.....	10	380
Monument (relief cabin).....	20	400
Nenana.....	17	417
Nenana Mission (relief cabin).....	11	428
Minto (no station).....	17	445
Tolovana.....	32	477
Hot Springs.....	32	509
American Creek (no station).....	21	530
Fort Gibbon.....	27	557
Birches.....	51	608
Kokrinea.....	38	646
Melosi.....	37	683
Louden.....	29	712
Koyukuk.....	48	760
Nulato (end of second section).....	20	780

Stations.	Inter- mediate.	Total.
BRANCH LINES AND LOOPS.		
Hot Springs-Rampart:	<i>Miles.</i>	<i>Miles.</i>
Hot Springs.....	0	780
Eureka.....	22	802
Rampart.....	28	830
Fort Egbert-Boundary:		
Fort Egbert (radio).....	0	830
Boundary (no station).....	13	843
Fort Gibbon loop (Fort Gibbon radio to city office).....	.25	843.25
Nulato loop (Nulato radio to city office).....	.25	843.5
Nome-Fort Davis:		
Nome (radio).....	0	843.5
Nome (city office).....	.75	844.25
Fort Davis.....	3.75	848
CABLES.		
Seattle-Seward:		
Seattle.....	0	0
Sitka.....	1,086.08	1,086.08
Valdez.....	595.42	1,681.5
Fort Liscum.....	4.19	1,685.69
Valdez-Montague Island.....	68.87	1,754.56
Montague Island-Seward.....	127.79	1,882.35
Montague Island-Cordova.....	58.99	1,941.34
Cordova-Cape Whiteshed.....	9.72	1,951.06
Sitka-Skagway:		
Sitka.....	0	1,951.06
Cape Fanshaw (no station).....	210.6	2,161.66
Juneau.....	91.1	2,252.76
Haines.....	106.72	2,359.48
Skagway.....	17.88	2,377.36
Juneau-Douglas.....	2.82	2,380.18
Sitka-Japonski Island:		
Sitka.....	0	2,380.18
Japonski Island.....	.35	2,380.53
Cape Fanshaw-Ketchikan:		
Cape Fanshaw (no station).....	0	2,380.53
Wrangell.....	74.27	2,454.80
Hadley.....	80.08	2,534.88
Ketchikan.....	31.83	2,566.69
Fort Lawton-Fort Worden:		
Fort Lawton.....	0	2,566.69
Fort Worden.....	39.59	2,606.28
Fort Lawton-Fort Ward:		
Fort Lawton.....	0	2,606.28
Fort Ward.....	11.85	2,618.13
Seattle-Fort Lawton:		
Seattle.....	0	2,618.13
Fort Lawton.....	8.67	2,626.80
RADIO.		
Egbert-Circle.....	110	.....
Circle-Fairbanks.....	126	.....
Egbert-Fairbanks.....	197	.....
Fairbanks-Gibbon.....	130	.....
Gibbon-St. Michael.....	330	.....
Nome-St. Michael.....	127	.....
St. Michael-Kotlik.....	52	.....
Kotlik-Nome.....	139	.....
Petersburg-Wrangell.....	30	.....
Fairbanks-Nulato.....	305	.....
Gibbon-Nome.....	400	.....
Gibbon-Nulato.....	181	.....
Gibbon-Circle.....	232	.....
Gibbon-Egbert.....	320	.....
St. Michael-Nulato.....	150	.....
Nome-Nulato.....	220	.....
Nome-St. Paul (naval).....	558	.....
Nulato-Kotlik.....	214	.....
RECAPITULATION.		
Land lines.....		848
Cables.....		2,626.8
Total.....		3,474.8

Ten radio stations.

NOTE.—For administrative purposes the Washington-Alaska Military Cable & Telegraph System is divided into three sections, viz, cable section from Seattle to Sitka, inclusive, with headquarters at Seattle; first section from Valdez to and including Fairbanks city office and radio station, and the cable stations at Seward and Cordova, with headquarters at Valdez; second section includes the remainder of the land lines and all other radio stations in the interior of Alaska, with headquarters at Fort Gibbon.

While there were 24 interruptions of the cables on this section reported during the year, most of them were of comparatively short duration and caused by the operations of the cable boat in inserting new special type deep-sea cable where the action of ocean currents and unfavorable location had caused the cables to become weak, physically and electrically. The improvement has been so marked that it is hoped that serious consideration can soon be given to duplexing of the main cable. This work of improvement will be continued.

SECOND SECTION.

The lines and stations of this section, extending from Chena to Nulato and inclusive of all radio stations except Fairbanks, are reported in excellent condition. The line from Fort Gibbon to Nulato was completely traversed and thorough repairs made, also from Rampart to Eureka and from Fort Gibbon to Hot Springs. Interruptions to the land lines totaled 12 days. The longest was of seven days duration due to the great storm of January 4, 1916. Interruptions to the radio only totaled 16 hours, of which 8 hours was due to the breaking of a mast at the St. Michael station during that storm.

The former stations at Minto and Nenana have been abandoned and consolidated into a station at the new town site of Nenana, 13 miles below the old Nenana station and 20 miles above the old Minto station. This change was made on account of the construction of the new railroad, which will cross the Tanana River at this point.

RADIO.

The radio stations continued in efficient operation during the entire year, the total of interruptions being less than one day. They continue to demonstrate their value as a link in the telegraph system, being especially adapted for use in Alaska, where the topographical and climatic conditions are almost wholly unfavorable to the continuous maintenance and operation of land line construction. All traffic for St. Michael, Nome, and other points west of Nulato is now being handled satisfactorily by radio and new stations, which will furnish communication to a district heretofore without telegraphic facilities, are now in the course of construction at Holy Cross and Fort Yukon.

Detailed statement of expenditures under Army appropriation act, approved March 4, 1915.

Appropriation for fiscal year 1916.....		\$50,000.00
1. For all radiotelegraph installations.....	\$5,202.28	
2. Rebuilding and betterments to the military telegraph lines, second section.....	3,530.21	
3. Rebuilding and betterments to the military telegraph lines, first section.....	13,950.53	
4. Extensions and betterments to the Alaskan cable system	27,316.98	
	<hr/>	50,000.00

CONDITION OF ENLISTED MEN IN ALASKA.

There were 207 enlisted men of the Signal Corps on duty in connection with the operation and maintenance of the system at the end

of the fiscal year 1915 and 187 on June 30, 1916, making a loss of 20 men during the year. The average number of infantrymen on duty with the Signal Corps in Alaska was 25. There were two desertions during the year and no deaths.

PHILIPPINE ISLANDS.

Construction, maintenance, and operation of post telephone systems, military telegraph lines, radiotelegraph stations, the installation of fire-control systems, the issue and maintenance of unit accountability equipment for the organized strength in the Philippines have been satisfactorily conducted during the year.

There are 17 post telephone systems in operation, having a total of 1,091 telephones. Repairs and improvements have been made to the systems at Regan Barracks, Camp John Hay, Camp McGrath, Camp Eldridge, Camp Overton, and Forts William McKinley and San Pedro. The telephone systems at Augur Barracks (Jolo), and subpost Asturias were reconstructed. Changes and betterments were made at other posts. The systems at Warwick Barracks and Camp Gregg were discontinued; the telephone service at the former post is now being supplied by a commercial company.

Military telegraph offices at Camp John Hay (Mountain Province) and Camp McGrath (Batangas) were maintained with equipment supplied by the Bureau of Posts, but enlisted men of the Signal Corps were detailed for duty as operators.

The Manila-Fort Mills submarine cable gave excellent service throughout the year. During the year there was a total of 19,278 messages handled over this cable.

Radiotelegraph stations were maintained at Fort Mills, Fort William McKinley, and Manila. The station at Fort Mills (Corregidor) gave excellent satisfaction throughout the year, establishing communication with trans-Pacific transports in the vicinity of Guam and to some distance east of Nagasaki, after their departure from Manila. This station also communicates with the interisland transports, and commercial radiograms are exchanged between Fort Mills and merchant vessels. The receipts during the year were \$751.58 for "this line" and \$293.09 for the "other line." The total number of messages handled was 21,135.

A radio set was installed on the mine planter *San Pedro*. Operators are detailed for duty on the interisland transports *Liscum*, *Merritt*, and *Warren*. The latter vessel was equipped with a storage battery auxiliary for emergency use.

Extensions and repairs to the fire-control system were continued throughout the year, rather than new work. All material for the fire-control installation at Fort Drum has been transferred to the district engineer for installation by the Corps of Engineers.

During the year 48,338 feet of cable were laid at Fort Mills for the fire-control and post telephone systems, 122 new telephones were added to the system, and a signal mast and Ardois lights were installed. The target range at Fort Mills was equipped with a buzzer annunciator system.

The Signal Corps general supply depot at Manila carries a large stock of both fire-control and signal-service material, and during the year 1,380 shipments were made. The shop at this depot makes all

necessary repairs to equipment sent in for that purpose, and during the year manufactured and repaired 2,565 articles, having a total value of \$47,978.84.

Two companies of the Signal Corps are on duty in the Philippine Department—Field Company L, stationed at Fort William McKinley, Rizal, and Depot Company F, stationed at Manila. The majority of the members of the latter company are on detached service throughout the islands performing duty as telegraph and radio operators, telephone repairmen, fire-control construction work, machinists, clerks, storekeepers, etc.

HAWAII.

The original authorized fire-control system in the coast defenses of Oahu was completed, but a number of changes and extensions have been found necessary. A small amount of original work and a considerable amount of repair work required the services of several Signal Corps men during the year.

An electrical range-transmitting device was installed at Battery Harlow, Fort Ruger. Detailed estimates have been prepared for the Signal Corps material for the land defense scheme on the northeast fronts at Pearl Harbor and for antiaircraft guns. Conduits for the permanent underground telephone system at Fort Kamehameha have been completed and are ready for the installation of the cables.

A switchboard and 30 telephones were installed in the department hospital at Fort Shafter, the material being supplied by the Quartermaster Corps.

The Signal Corps has but one permanent radio station in the Hawaiian Islands, this being located at Fort De Russy. While this station is of comparatively small power (2-kilowatt), it operates very successfully with the transports to and from Honolulu up to a distance of about 1,000 miles.

Military telegraph lines were maintained connecting departmental headquarters at Honolulu with all stations of troops on Oahu. They were:

Honolulu via Fort Shafter to Schofield Barracks, 27½ miles.

Honolulu via Fort Armstrong to Forts Kamehameha, De Russy, and Ruger, 19 miles. Six offices handled a total of 24,245 messages.

THE PANAMA CANAL ZONE.

The Signal Corps engineer sent to the Panama Canal Zone in connection with the installation of the fire-control systems is still on duty there. The work has been under the direction of the canal authorities and is practically complete.

Radio Company A, Signal Corps, was transferred from the United States to the Canal Zone during the year, and arrived at Corozal December 15, 1915. This company consisted of 2 officers and 74 enlisted men. To meet the need for additional signal troops in the Southern Department it was necessary to return this organization to the United States for duty in that department. Twenty-eight enlisted men with the 1-kilowatt skid set and 2-kilowatt wagon set assigned to this company left the Canal Zone for New Orleans on

April 23, 1916, and the remainder of the company sailed June 25, 1916. A platoon of Telegraph Company H, Signal Corps, remained in the Canal Zone during the year and was engaged in the installation and maintenance of telephone systems.

UNITED STATES.

The operations of the corps have, in addition to the work of the aviation section, included the management of military telegraph lines; the construction of military telephone lines and camp telephone systems; the establishment of post telephone and annunciator buzzer target-range systems; the supply of signal unit accountability equipment to the Army and the National Guard; the supply of material for the maintenance of fire-control systems for the coast defenses and equipment for fort signal stations for communicating with vessels of the Navy; the enlistment and training of recruits in visual signaling, electricity, radiotelegraphy, and telephone matters; electrical and other experimental work; and the preparation of the corps for war and other emergencies.

Radio Company A: A detachment of 28 enlisted men of this company arrived at Fort Sam Houston from the Canal Zone April 29, 1916. Fourteen men of this detachment with radio skid set No. 2 were stationed at Mission, replacing the detachment with radio tractor No. 2, which was ordered to Columbus. The remaining men of this detachment with wagon radio set No. 6 were stationed at Del Rio. The headquarters of Radio Company A, consisting of 2 officers and 47 enlisted men, with all equipment, animals, and transportation, arrived at New Orleans from the Canal Zone June 30, 1916, and proceeded to Fort Sam Houston for station.

Field Company D: This company was transferred from Texas City to Mission September 30, 1915. It took over all the lines of communication established and operated by Telegraph Company H in that section and installed additional camp telephone systems and telegraph and telephone lines. A detachment, stationed at Ojo de Agua, was attacked by bandits on the night of October 21, 1915; two men were killed and three seriously wounded, and the radio pack set destroyed. On March 11, 1916, a detachment of 20 men of this company with radio pack sets was ordered to Columbus for duty with the punitive expedition. On June 22, 1916, the company left Mission en route to Brownsville for station, arriving at that point June 25, 1916.

Field Company E: A detachment of 18 enlisted men of this company with wagon radio set No. 1 arrived at Fort Sam Houston from Hawaii May 13, 1916, and was sent to Eagle Pass for station. The headquarters of this company, consisting of 1 officer and 75 enlisted men, was ordered from Hawaii on June 18, 1916.

Telegraph Company H: This company, less one platoon which is stationed in the Canal Zone, has been on duty in the Southern Department during the year. Detachments have been engaged in the construction and repair of border telephone and buzzer lines; the construction of a telephone line from Fort Sam Houston to Leon Springs; the installation of camp telephone systems; and the maintenance and operation of the buzzer system in the "Big Bead" district. During the month of March one telegraph section of this com-

pany, consisting of 23 enlisted men with section equipment, transportation, etc., was ordered to Columbus for duty with the punitive expedition, and 10 additional men joined the detachment at that point March 18, 1916.

Field Company E and a platoon of Depot Company M were on duty in this department during the year. Field Company E, in addition to its routine duties, carried on a great deal of experimental work in visual signaling. A detachment of 18 enlisted men with a radio wagon set were returned from Honolulu in April, 1916, for duty in the Southern Department. The balance of the company subsequently proceeded to the Southern Department, sailing from Honolulu July 5, 1916. The personnel of the platoon of Depot Company M was engaged on fire-control maintenance and telephone work in the Hawaiian Department during the year.

Field Company I: This company has been on duty in the Southern Department during the entire year with headquarters at Camp Fort Bliss until March 23, 1916, when it was transferred to Columbus for duty with the punitive expedition. This company operated and maintained the buzzer system in the "Big Bend" district until relieved by a detachment of Telegraph Company H during January. The company also operated the wagon and pack radio stations in the Hachita and Douglas districts.

GENERAL DEPOTS OF SUPPLY.

The administration of the Signal Corps general supply depots at Fort Wood, Fort Mason, and Omaha has continued satisfactory during the year. To meet conditions on the Mexican border and to facilitate the issue of unit-accountability equipment to troops assigned to border duty, additional supply depots were established at San Antonio and El Paso.

The total weight of material received and shipped by the depots, not including the San Antonio and El Paso, aggregated 3,593 tons, comprising 56,830 packages, boxes, and crates; and 8,736 requisitions were received and disposed of.

The depot repair shops have been economically utilized in the quick repair of unserviceable equipment received at depots. The total value of material repaired was \$107,992.22; the cost of repairs exclusive of labor was \$1,264.76.

BORDER TELEPHONE LINES.

During the months of September and October last the military telephone line from Laredo to Zapata was extended from the latter point to San Pedro ranch and from that point to Roma, connecting at the latter place with the commercial telephone system. This work was completed on October 22 and provides continuous telephonic communication from Laredo to Brownsville. A Government telephone line is also in operation from Laredo northward to Palafox.

A Signal Corps telephone line is in operation from Eagle Pass to Blocker's ranch and from Eagle Pass to Lehman's ranch.

Following the raid on the patrol station at Glen Springs in May, a detachment of Telegraph Company H was ordered to Marathon

for the purpose of constructing a buzzer or telephone line from that point to Boquillas, on the river. A buzzer line was first constructed and later converted into a telephone line.

A telephone line between Hachita and Las Cienegas was completed on June 28 and is being extended to Culberson's ranch and Alamo Hueco. Buzzer stations were installed at Marfa, Rawl's ranch (Mahon ranch), Terlingua, Presidio, Shafter, Candelaria, Quinn's ranch, and Alpine.

There are at present approximately 677 miles of buzzer and telegraph lines, 642 miles of telephone lines, and 19 radio stations in operation, giving what is believed to be a complete system along the entire border and enabling the officer in command to keep in constant touch with all organizations and outposts.

CABLE SHIP.

The United States Army transport *Burnside*, with headquarters at Seattle, Wash., has continued on duty as cable ship in connection with the repair and maintenance of the Alaskan cable system.

MILITARY TELEGRAPH LINES.

The following military telegraph lines are operated and maintained in the United States:

(a) Holbrook to Fort Apache, Ariz. This line handles official and commercial business. A relay station is located at Snowflake, 30 miles from Holbrook.

(b) Spofford to Fort Clark, Tex.—10 miles—handles official and commercial business.

"This line" receipts, amounting to \$683.68, were collected and deposited with the Treasurer of the United States. "Other line" tolls, amounting to \$293.31, were collected and turned over to connecting commercial companies.

Twenty-eight offices were in operation at the close of the fiscal year, 25 being operated by enlisted men of the Signal Corps and 3 by civilian operators.

ARMY SIGNAL SCHOOL.

Eleven student officers composed this year's class, which was given instruction in the same subjects as the previous year, but, owing to circumstances, it was found necessary to shorten the course and graduate the class on May 10, 1916.

POST TELEPHONE SYSTEMS.

On account of the absence of the garrisons from a large number of posts but little work was undertaken during this year, and at several of the posts it was necessary to place the telephone systems practically out of commission, leaving only such telephones as were necessary for general administrative purposes. Extensive repairs were made at Fort Ontario and Fort Oglethorpe. Material was supplied and telephone systems constructed at the camps of instruc-

tion at Plattsburg, Tobyhanna, and Oglethorpe. They were more or less of a temporary nature and were partially dismantled when the camps were discontinued.

In the Panama Canal Zone common battery systems were installed at headquarters, United States troops, Ancon, consisting of a 50-drop switchboard and 48 telephones; camp at Empire, 100-drop switchboard and 81 telephones; Camp Gaillard, 100-drop switchboard and 69 telephones; Corozal, 100-drop switchboard and 72 telephones; Gatun, local battery system with a 50-drop switchboard and 24 telephones. The telephone system at Camp E. S. Otis was reconstructed and new motor generator set and switchboard were installed.

At Fort Huachuca a complete new underground system with a 200-line common battery switchboard and approximately 100 telephones and all the necessary underground distribution was installed, giving this post a telephone system of the most modern type.

New switchboards were installed at Forts George Wright, McDowell, and Clark. These switchboards are of greater capacity, to care for extensions.

TARGET-RANGE BUZZER ANNUNCIATOR SYSTEMS.

No new installations were undertaken. More or less work was necessary at all ranges to place them in proper condition for the target seasons. Extensive repairs were made to the ranges at Forts Ethan Allen and Leavenworth and Leon Springs. These systems were thoroughly overhauled and placed in first-class condition. Plans and estimates for a new system to be installed on the range at Fort Huachuca were prepared and submitted.

FIRE-CONTROL SYSTEMS AT COAST-DEFENSE COMMANDS.

While the Signal Corps is now only charged with the supply of material for the installation and maintenance of the fire-control systems at coast-defense commands, advice and recommendations are usually requested in connection with all estimates. The usual amount of maintenance work has been performed. It consisted of more or less reconstruction work in connection with both the fire-control and post-telephone systems at practically all the Coast Artillery posts.

COMMERCIAL TELEPHONE SERVICE FOR COAST-DEFENSE COMMANDS.

Commercial telephone service at posts in the coast-defense commands is provided for from funds specially appropriated for this purpose and expended by the Signal Corps. This service is obtained in most cases through trunk lines to the Government switchboard. At the remaining posts the local authorities desire to continue the present system of renting lines and the necessary instruments. Provisions have been made for commercial telephone service at all the coast-defense posts, with the exception of the defenses at Mobile, where the local conditions do not warrant the expenditure. Eight thousand five hundred dollars was expended for this purpose during the past fiscal year, and a like amount has been appropriated for the fiscal year 1917. The policy of arranging for the direct con-

nection of the commercial trunk lines to the post telephone switchboards has resulted in a decided improvement to the service.

PERSONNEL OF THE SIGNAL CORPS.

The enlisted strength of the Signal Corps aggregates 1,638 men, including 339 men in the aviation section. During the fiscal year the following changes took place: Enlisted and reenlisted, 315, of whom 258 were recruits; deserted, 26, being 1.76 per cent of the total force; died, 6, 0.4 per cent; discharged for disability, 14, 0.95 per cent; discharged by purchase, 98, 6.65 per cent. There were 77 enlisted men transferred to the reserve during the year.

ENGINEERING DIVISION—SIGNAL OFFICE.

The work handled during the fiscal year was: Orders placed, 1,950; vouchers audited and paid, 2,629; transportation requests prepared, 900; advertisements for proposals issued, about 7,000 copies distributed, 850; shipping manifests on supply depots, 3,021.

Letters, memoranda, post-card notices, and a large number of other miscellaneous papers pertaining to these items are not included in the statement, it being impracticable to maintain a record of the number.

Eighty-one illustrations were prepared and 35 revised for use with the revised edition of Signal Corps Manual No. 3. Approximately 8,500 copies of blue prints and lithographs were issued in connection with the purchase of supplies and for the information of the technical force in the field.

The following shows the disbursements from Signal Corps appropriations during the fiscal year:

Appropriation.	Amount.	Disbursements.	Balance unexpended.
Signal Service of the Army 1916.....	\$600,000.00	\$600,000.00	.....
Signal Service of the Army 1916-17.....	600,000.00	600,000.00	.....
Maintenance, etc., fire control installations at seacoast defenses.....	125,327.23	128,534.67	\$6,792.56
Maintenance, etc., fire control installations at seacoast defenses, insular possessions.....	11,244.13	10,500.21	653.92
Washington-Alaska Military Cable and Telegraph System. 1916.....	50,000.00	50,000.00	.....
Commercial telephone service at Coast Artillery posts, 1915-16.....	1,222.00	1,220.10	1.90
Commercial telephone service at Coast Artillery posts, 1916.....	6,500.00	5,673.31	\$26.69
Repairs of deep sea military cables.....	5,991.07	5,991.07	.....
Expenses, commission on selection of site for aviation school, 1916...	1,000.00	974.10	25.90

The following shows the disbursements for allotments to the Signal Corps during the fiscal year:

Appropriation.	Amount.	Disbursements.	Balance unexpended.
Fire control installations.....	\$86,865.47	\$58,688.24	\$28,177.23
Board of Ordnance and Fortifications.....	18,000.00	3,608.31	14,391.69
Equipment of Coast Artillery armories, Organized Militia.....	980.62	980.62	.....
Panama fortifications.....	2,170.26	2,170.26	.....
Arms, uniforms, equipments, etc., Organized Militia, 1916.....	17,068.00	17,068.00	.....
Field Artillery for Organized Militia, 1915-1917.....	16,000.00	4,395.02	11,604.98

SIGNAL CORPS LABORATORY.

The laboratory, maintained in connection with the Engineering Division, is proving more and more valuable each year in connection with the development of equipment and the construction of models, as well as the construction of certain radio equipment which it is impracticable to procure from manufacturing companies.

A large portion of the work during the past year was in connection with radio equipment and numerous improvements have been made in both the portable and station sets, especially the receiver used with these. In order to obtain satisfactory field equipment that will withstand the hard use to which it is subjected, it is necessary that some portions of the pack radio sets be constructed by the Signal Corps as well as a complete set assembled under the direct supervision of those having expert knowledge in this line. While this work has taxed the laboratory to its utmost capacity, practically no delay has been experienced in getting these sets out, and during the year 36 were assembled.

It has still been found impracticable to have the portable radio masts used for field sets made up elsewhere and it has therefore been necessary that this work be done in the laboratory. During the year there has been made up fifty-six 40-foot masts and twenty-four 80-foot masts.

Another field telephone switchboard for brigade purposes, similar to the one made up last year, but embodying many improvements, was constructed and is now in the field for test. Several models of a new and improved breast reel, also for use in connection with the brigade telephone equipment, were constructed and are now undergoing tests in the field with the other equipment. A model of a new field induction telegraph set embodying improvements over the present set was constructed and is now being tested.

PUBLICATIONS.

RADIOTELEGRAPHY.

The revised edition of this manual, which is issued as Signal Corps Circular No. 1, 1914 (revised May, 1915), has been distributed to the service. This manual, in its new form, treats in an elementary way of the general principles of radiotelegraphy and has been an important aid in familiarizing the service with the operation, care, and maintenance of the radiotelegraph sets issued by the Signal Corps.

RADIO LOG BOOK.

The new edition of the Radio Log Book has been received from the printer and issued to the personnel at radio stations of the Army. The revised edition of this book contains instructions and information for the station personnel.

PRICE LIST.

The price list of equipment and material, issued annually to the Army and the National Guard, was revised to June 30, 1916, and issues have been made. This pamphlet, in its new form, shows the unit price, weight, and revised nomenclature of standard equipment, maintenance parts, and material issued by the Signal Corps in connection with visual signaling, fire control installations of the Coast and Field Artillery, and post telephone and small-arms target-range systems.

SIGNAL CORPS MANUAL NO. 2.

The revised edition of this manual, "Regulations for United States Military Telegraph Lines, Alaskan Cables, and Telegraph Stations, U. S. Signal Corps," with all technical matter eliminated, has been received from the printer and issued to the service.

SIGNAL CORPS MANUAL NO. 3.

Signal Corps Manual No. 3, "Electrical Instruments and Telephones of the U. S. Signal Corps," has been rewritten. The new manual is entitled "Technical Equipment of the Signal Corps." Revised text of portions of Signal Corps Manuals 3, 4, and 7 are embodied in the new manual, together with a great amount of original text fully illustrated. This manual contains technical information on various subjects relative to telephony, telegraphy, cable systems, aerial-line construction, post-telephone systems, submarine cables, and submarine telegraphy, as well as an enumeration of all standard Signal Corps equipment, with detailed description of various ap-

paratus and their uses. The new edition is now being printed and will be ready for issue in the near future.

SIGNAL CORPS MANUAL NO. 8.

The revised edition of Signal Corps Manual No. 8, "Apparatus for Fire Control and Direction," fully described in my last annual report, has been received from the printer and issued to the service.

SIGNAL BOOK, UNITED STATES ARMY.

The Army Signal Book (1916) has been received from the printer and distribution made. This publication has been completely rewritten and all existing inconsistencies in signaling methods eliminated.

RADIOTELEGRAPHY.

Continual improvements are being made in the radio equipment furnished by the Signal Corps, in order that the equipment supplied may keep pace with the rapid advancement of the art.

There are now being constructed under the direct supervision of the Engineering Division of this office eight wagon sets, which will embody many improvements over those previously constructed.

Much work is also being done toward the development of equipment for the construction of a number of additional 2-kilowatt tractor sets, which will be along the lines of those now operating so successfully along the Mexican border.

More or less work has been done with a view of equipping the radio hand generators with an engine drive, and while this, to a certain extent, has been successful, a satisfactory engine has not yet been found. The sets so equipped, however, are giving very good service, and by their use make available several men in each case for other purposes who would be required to operate the hand generators.

Material is being assembled for the construction of a large radio station at Fort Bliss, which will be similar to the one now erected at Fort Sam Houston. Estimates have also been prepared for stations at Forts McIntosh and Huachuca, and it is expected that these stations will be erected during the coming year.

While no large installations were made during this year, several of the Coast Artillery posts and harbor boats were equipped with 250-watt sets. They were the *Randol*, *Morrison*, *Anderson*, *Arnold*, *Getty*, *Brannan*, *Weeks*, *Pickering*, and *Reno*. These installations were made partly under the supervision of the Signal Corps. Sets installed on the harbor boats *Mifflin* and *Howard* were installed by the personnel of the Coast Artillery. Two hundred and fifty-watt table sets were also installed at Fort Constitution, Fort Caswell, Fort Moultrie, Fort Date, Fort Terry, and Fort San Jacinto. Fort Adams, R. I., was equipped with a 1-kilowatt coast defense radio station.

An additional motor generator set was installed in the radio station at Fort Winfield Scott, this set to operate from the direct-current post power system. With the installation of this set three sources of power are now available for the operation of the station and its continuous operation is practically assured.

The five mine planters in the United States, namely, *Armistead*, *Ringgold*, *Schofield*, *Ord*, and *Frank*, were equipped with 1-kilowatt radio sets, including the antenna and other necessary equipment. On several occasions, when the transports stationed on the Atlantic coast were placed in or out of commission, the Signal Corps has overhauled or dismantled the radio sets. The radio equipment on the trans-Pacific transports has been properly maintained, and such repairs

as were necessary were made during the stay of these transports at San Francisco. At Fort Wood, New York Harbor, a new steel tower was erected to replace a wooden mast partially destroyed by storm.

The Signal Corps radio laboratory at the Bureau of Standards has continued to render valuable service in the improvement of the present radio equipment and in designing and testing such new apparatus as conditions have shown to be necessary. Improvements have been made in the pack and larger sizes of receiving sets, so that it is possible with the present sets to handle messages that would have been inaudible with the former types. The work of standardization of the radio equipment has been continued so as to secure as far as possible complete interchangeability of parts.

Mutual benefits have been derived by the cooperation of the laboratory of the Signal Corps with those maintained by the Department of Commerce and by the Navy Department, particularly in the constant interchange of data that has prevented a needless duplication of work.

Radio stations installed by the Signal Corps.

Name of station.	Call letter.	Power, kilowatts.	Whether open to public service.
UNITED STATES.			
Fort Adams, R. I.....	WUU	1	Not open to public service.
Fort Andrew, Mass.....	WUA	1	Do.
Fort Barrancas, Fla.....	WZD	1	Do.
Brownsville, Tex.....	WUZ	2	Do.
Fort Caswell, N. Y.....	WUT	1	Do.
Fort Constitution, N. H.....	WZE	1	Do.
Fort Crockett, Tex.....	WUX	1	Do.
Fort Dade, Fla.....	WZK	1	Do.
Fort H. G. Wright, N. Y.....	WUC	1	Do.
Fort Hancock, N. J.....	WUB	1	Do.
Fort Howard, Md.....	WZB	1	Do.
Fort Leavenworth, Kans.....	WUD	3	Do.
Fort Leavenworth, Kans., Army Signal School.....	WUV	1	Experimental.
Fort Levett, Me.....	WUE	1	Not open to public service.
Fort Monroe, Va.....	WUF	1	Do.
Fort Monroe, Va., Coast Artillery School.....	WUG	1	Do.
Fort Morgan, Ala.....	WUR	1	Do.
Fort Moultrie, S. C.....	WZF	1	Do.
Fort Riley, Kans.....	WUI	3	Do.
Fort Rosecrans, Cal.....	WUS	1	Do.
Fort Sam Houston, Tex.....	WUJ	10	Do.
Fort San Jacinto, Tex.....	WUY	1	Do.
Fort Screven, Ga.....	WZA	1	Do.
Fort Stevens, Ore.....	WUK	1	Do.
Fort Terry, N. Y.....	WUW	1	Do.
Fort Totten, N. Y.....	WUL	1	Do.
Washington, D. C., Signal Corps Laboratory.....	WUP	1	Experimental.
Fort Whitman, Wash.....	WZC	1	Not open to public service.
Fort Winfield Scott, Cal.....	WUO	2	Do.
Fort Wood, N. Y.....	WUM	1	Do.
Fort Worden, Wash.....	WUN	1	Open to public service.
ALASKA.			
Circle City.....	WVA	3	Open to public service.
Fairbanks.....	WVB	5	Do.
Fort Egbert.....	WVC	5	Do.
Fort Gibbon.....	WVD	10	Do.
Fort St. Michael.....	WVE	3	Do.
Kotlik.....	WVF	1	Do.
Nome.....	WVG	10	Do.
Nulato.....	WVH	10	Do.
Petersburg.....	WVI	1	Do.
Wrangell.....	WVJ	1	Do.
PHILIPPINE ISLANDS.			
Fort Frank (Carabao Island).....	WVL	1	Not open to public service.
Fort Hughes (Caballo Island).....	WVM	1	Do.
Fort Mills (Corregidor Island).....	WVN	10	Open to public service.
Fort Mills (Corregidor Island).....	WVZ	1	Not open to public service (auxiliary station).

Radio stations installed by the Signal Corps—Continued.

Name of station.	Call letter.	Power, kilowatts.	Whether open to public service.
PHILIPPINE ISLANDS—continued.			
Fort Drum (El Fraile Island).....	WVP	$\frac{1}{2}$	Not open to public service.
Fort William McKinley (Rizal).....	WVQ	$\frac{1}{2}$	Do.
Fort Wint (Grande Island).....	WVR	1	Do.
Manila.....	WVU	1	Do.
HAWAII.			
Fort De Russy (Honolulu).....	WZG	2	Not open to public service.
Fort Shafter.....	WZH	$\frac{1}{2}$	Do.
UNITED STATES ARMY TRANSPORT SERVICE.			
Buford.....	WXA	2	Open to public service.
Burnside (used as cable ship).....	WXR	3	Not open to public service.
Crook.....	WXB	2	Open to public service.
Dix.....	WXC	2	Do.
Kilpatrick.....	WXD	2	Do.
Liscum.....	WXE	2	Do.
Logan.....	WXF	5	Do.
Meade.....	WXG	2	Do.
McClellan.....	WXH	2	Do.
Merritt.....	WXI	2	Do.
Sheridan.....	WXJ	5	Do.
Sherman.....	W XK	5	Do.
Sumner.....	WXL	3	Do.
Thomas.....	WXM	5	Do.
Warren.....	WXN	2	Do.
CABLE SHIPS.			
Burnside. (See Transports.)			
Cyrus W. Field.....	WXS	2	Not open to public service.
Joseph Henry.....	WXT	1	Do.
ARTILLERY HARBOR TUGS.			
Captain A. M. Wetherill.....	WYT	$\frac{1}{2}$	Not open to public service.
Captain Chas. W. Rowell.....	WYI	$\frac{1}{2}$	Do.
Captain Gregory Barrett.....	WYP	$\frac{1}{2}$	Do.
Captain James Fornance.....	WYM	$\frac{1}{2}$	Do.
Captain T. M. Morrison.....	WYZ	$\frac{1}{2}$	Do.
General A. M. Randol.....	WYJ	$\frac{1}{2}$	Do.
General G. W. Getty.....	WYS	$\frac{1}{2}$	Do.
General George H. Weeks.....	WZT	$\frac{1}{2}$	Do.
General Harvey Brown.....	WYK	$\frac{1}{2}$	Do.
General J. M. Brannan.....	WZV	$\frac{1}{2}$	Do.
General Miffin.....	WZX	$\frac{1}{2}$	Do.
General Nathaniel Greene.....	WZR	$\frac{1}{2}$	Do.
General R. B. Ayers.....	WYL	$\frac{1}{2}$	Do.
General R. H. Jackson.....	WYW	$\frac{1}{2}$	Do.
General R. N. Batchelder.....	WZW	$\frac{1}{2}$	Do.
General Richard Arnold.....	WYY	$\frac{1}{2}$	Do.
General Robert Anderson.....	WYH	$\frac{1}{2}$	Do.
General Robert Swartwout.....	WYU	$\frac{1}{2}$	Do.
General S. B. Holabird.....	WYV	$\frac{1}{2}$	Do.
General Timothy Pickering.....	WZQ	$\frac{1}{2}$	Do.
Henry Wilson.....	WZS	$\frac{1}{2}$	Do.
Lieutenant George M. Harris.....	WYR	$\frac{1}{2}$	Do.
Major Albert G. Forse.....	WYQ	$\frac{1}{2}$	Do.
Major Evan Thomas.....	WYO	$\frac{1}{2}$	Do.
Major Guy Howard.....	WZY	$\frac{1}{2}$	Do.
Reno.....	WYN	$\frac{1}{2}$	Do.
Sprigg Carroll.....	WZU	$\frac{1}{2}$	Do.
San Pedro.....	WZZ	$\frac{1}{2}$	Do.
UNITED STATES ARMY MINE PLANTERS.			
Colonel George Armistead.....	WYG	1	Not open to public service.
General Royal T. Frank.....	WYA	1	Do.
General Samuel M. Mills.....	WYB	2	Do.
General Henry J. Hunt.....	WYD	1	Do.
General Henry Knox.....	WYE	1	Do.
General Edward O. C. Ord.....	WYF	1	Do.
General John M. Schofield.....	WXW	1	Do.
Major Samuel Ringgold.....	WYC	1	Do.
MILITIA ARMORIES.			
Portland, Me.....	WXV	$\frac{1}{2}$	Do.

MILITARY AVIATION.

The concentration of the forces composing the punitive expedition to Mexico marked a distinct step in military aviation in the United States. It was the first time this branch of the service had been called upon to put a tactical unit into the field. There was only one such in the service, namely, a small squadron, the First, at San Antonio, Tex. This, while equipped with as good material as could be obtained at the time, had only eight low-powered machines. These machines at the time of their transportation to Columbus had been in service for many months. The altitudes encountered in Mexico, up to 12,000 feet, the vast distances to be covered, and the lack of cultivated areas and resources in general made this theater one of the hardest to operate in which any army had ever entered. The few machines were rapidly used up, although they did a great amount of flying and rendered extremely valuable service to the punitive expedition.

The urgent deficiency act of March 31, 1916, gave the aviation section of the Signal Corps \$500,000, the greatest sum up to that time that had been appropriated at any one time for aviation in the Army. A board of officers of the aviation section, who were experts in the construction and purchase of material, was assembled at Washington and consulting engineers of the highest caliber obtained. This board recommended certain types of material to be bought, and, as a result, a squadron equipment of twelve 160-200 horsepower military tractor biplanes was purchased and delivered to the aero squadron with the punitive expedition in Mexico. Other material was purchased for the squadron, so that it gradually became a splendidly equipped organization complete in all details, that is, aeroplanes, motor trucks, portable machine shops, automatic photographic cameras, machine guns, shoulder rifles, bombs, and other accessories.

In spite of the success obtained in organizing and equipping this first squadron, although, indeed, much time and effort has been required to do so, it appears that even up to the present time the state of the art of aeroplane construction in this country is not satisfactory and it is still impossible to obtain suitable material in large amounts on short notice. Due also to the entire difference of the theater of operations of the American Army in Mexico from the European theater of war, the aeroplanes required in the United States must be of quite a different type. Many things relating to them remain to be learned and worked out before an entirely satisfactory machine is obtained.

One deficiency which made itself very apparent was the propeller difficulty that was experienced in the high altitudes and dry atmosphere of northern Mexico. For a while the difficulty of keeping propellers in condition and obtaining suitable ones nullified the operations of the squadron. This, however, proved in the end to be an

advantage, because experience was gained in the construction of propellers that could have been obtained in no other way. All sorts of propellers were ordered, a propeller-making plant established at Columbus, and engineering talent all over the country enlisted in the solution of the problem. The results have been good, and the squadron is now in service condition. Indeed, it is reported that aeroplanes are habitually carrying the mails from Columbus to the commanding general's headquarters at Colonia Dublan some hundred miles away, the distance being covered in about 65 minutes.

As to the general development of material, the technical aero advisory and inspection board of the Signal Corps, assisted by consulting engineers, has sent out specifications for various types of aeroplanes, has assisted manufacturers in the design of equipment of all sorts, and has availed itself of all sources of information—the Bureau of Standards for the test of material, the opinions of distinguished engineers, and the actual trial of various devices in the air. In addition, aeroplanes of the latest type have been ordered from abroad.

An inspection department, composed of civilian engineers, has been organized and distributed among the various factories that are manufacturing aeroplane equipment for the Army.

The field of inspection not only embraces the manufacture of all sorts of heavier-than-air equipment for the aviation section, but extends also to the units in the field and to the determination of what materials must be obtained in advance for possible emergencies.

An aerostatic division has been established in the aviation section. Its organization is now going forward and recommendations have been made that the first balloon school be established at Fort Omaha, Nebr. A large balloon shed, a hydrogen gas plant, and other equipment is already there. Captive balloon organizations will be equipped as soon as practicable and instruction with training dirigibles will be inaugurated.

The aero company in the Philippine Islands has been maintained as originally planned, and is gradually building its quarters, hangars, and equipment. It still has the old equipment of aeroplanes which will be replaced as soon as possible.

The Signal Corps Aviation School at San Diego, Cal., has continued to turn out expert military aviators, and, it is believed, that the principles of flying, as taught at this school and evidenced by its graduates, are second to none. A field officers' course in aviation has been established here in accordance with Paragraph V, Bulletin No. 35, War Department, September 13, 1916. There are at present 45 officers of the Army undergoing instruction at this institution, which is the greatest number that has ever been on duty at that place at one time. In addition, two officers of the Marine Corps are being trained and some enlisted men.

The matter of the location of the aviation school, to be permanently established in California, is receiving consideration, and a site will be purchased in the near future.

The site for an experimental and proving ground is now being selected and will be purchased as soon as a decision is reached. A proper site which fulfills all the conditions is quite difficult to obtain. It must be located near manufacturing centers, have water enough so

that the firing of all sorts of ordnance and the dropping of explosive missiles may be carried on. It must be near railways, comparatively flat, and well drained.

The project for the development of the aviation section contemplates 7 aero squadrons for the Regular Army, 12 squadrons for the National Guard Divisions, and 5 for the defenses on both coasts besides aerostatic units for the mobile Army and Coast Artillery. The personnel for these will be made up from the Regular Army, both officers and enlisted men, of officers and enlisted men of the Reserve Corps, and of National Guard units. To train this personnel, the facilities of the civilian aviation schools will be utilized to their maximum, and finishing schools for such personnel have already been established and are being maintained at Chicago in the Central Department, and Mineola, Long Island, in the Eastern Department, by the aviation section. The tentative system to be followed in the general organization of the aviation section is as prescribed in General Orders No. 55, War Department, 1916, which is as follows:

**TENTATIVE SYSTEM FOR THE GENERAL ORGANIZATION OF THE AVIATION SECTION,
SIGNAL CORPS.**

Aside from the officers and enlisted men of the Regular Army, the aviation personnel will consist of civilians employed by the aviation section of the Signal Corps, reserve officers, enlisted men of the Enlisted Reserve Corps, and National Guard organizations mustered into the service of the United States.

As far as flying is concerned, nearly all the personnel must be trained from uninstructed material. This also applies, to a great extent, to mechanics and chauffeurs.

In general, the central office will provide for three divisions of duty.

First.—The provision of adequate material, such as aeroplanes and their accessories. This involves the preparation of specification for the material and its inspection under the inspection department of the central office. The inspection department in future is intended not only to reach all manufacturing plants and producers of material, but also all materials in the hands of tactical units.

Second.—A system by which the personnel will be trained. This involves a school system for the officers and a training system for the men in both civilian and military institutions.

Third.—The establishment of tactical units, their administration and supply.

The first will be handled by the central office through its technical departments, and issues of supplies ordered when and where necessary.

The second will be decentralized, as far as possible, but will be under the general jurisdiction of the central office in the same manner as other military educational institutions and service schools are under the War Department. There will be two general categories of schools: (a) The United States Army aviation schools (such as the one now at San Diego, Cal.), whose number, for the time being at least, is intended to be 3; that is, 1 for the Pacific coast, 1 for the Central States, and 1 for the East; (b) civilian schools maintained by manufacturers or others, which may be utilized for preliminary training purposes.

The country will be divided into three school districts. The commanding officer of the school at San Diego will have general jurisdiction over all the schools in the Western Department, the commanding officer of the school in the central part of the country will have jurisdiction over all the schools in the Central and Southern Departments, and the commanding officer of the school in the East will have jurisdiction over all the schools in the Eastern Department.

It is intended to send aviation personnel for all formations, except those of the Regular Army, to civilian aviation schools to obtain their preliminary instruction, after which they may finish their course at the Army aviation schools and obtain their military aviators' ratings.

The civilian schools will be handled along the following lines:

(a) A type of training machine will be prescribed by the Government for the use of the schools; (b) the schools will be given a certain compensation for the

Instruction of such personnel as may be assigned to them—this reimbursement will include the average breakage and will be paid when the student satisfactorily completes the course; students before assignment to a civilian school will be subjected to an examination by a board to determine their physical, mental, and moral qualifications to take the course.

Having completed their instruction the students will be available for commissions as reserve officers and assignment to units or other duty.

MILITARY DEPARTMENTS.

Each department will have an aviation officer, to be designated as such, on the staff of the department commander. The aviation officer, under the department commander, will have general supervision over all aviation personnel and stores (with the exception of aviation schools, testing grounds, and general supply depots of aviation material) within such departments; the general control of all officers, men, and civilian employees of the aviation section within the department; the instruction and equipment of all tactical units of heavier-than-air and lighter-than-air craft; the preparation of requisitions for the proper supply of aero units in his department; the plans for the creation of new aero units within the department, both in the Regular Army and the reserve of the Regular Army; and all other matters affecting the aviation section, including lists of the personnel of the aviation section, Signal Officers' Reserve Corps, and the Enlisted Reserve Corps, aviation section, Signal Corps.

When this system is fully put into effect, the aviation officers of the various departments will remain the same in peace and war, and the organization will be capable of rapid expansion to take care of war conditions. The tactical units (an aero squadron hereafter will have a depot unit of 3 officers and 20 men) would move off into the field, leaving behind them their respective depots, which depots could be moved wherever necessary, and personnel supplied directly to them from the school and depot systems.

The above indicates merely a general plan to be followed, as it is not deemed expedient to specify minute details to too great an extent at present. To begin with, this system will be put into effect by the issuance of orders and directive letters to the various officers concerned. Later, when all the points have been tried out, these matters may be incorporated into Army regulations.

Personnel will be obtained for the aviation section, Signal Corps, United States Army, as now prescribed by law and Army regulations.

Personnel for the aviation section, Signal Officers' Reserve Corps, under section 37, national-defense act, will be obtained as prescribed in General Orders, No. 32, War Department, July 28, 1916, and as per Appendix A, herewith.

Personnel for the Enlisted Reserve Corps, aviation section, Signal Corps, under section 55, national-defense act, will be obtained as prescribed in Appendix B, herewith.

Requirements for civilian aviation schools are contained in Appendix C, herewith.

The method by which officers and men of the National Guard may be detailed for duty at aviation schools under section 99, national-defense act, is mentioned in Appendix D, herewith.

APPENDIX A.

REQUIREMENTS FOR SERVICE IN THE AVIATION SECTION, SIGNAL OFFICERS' RESERVE CORPS.

1. Authority has been issued by the Secretary of War for the organization of the aviation section, Signal Officers' Reserve Corps. The section may consist of 296 officers. The grades in said section will be in the same proportion as those obtaining in the aviation section of the Signal Corps, United States Army, up to and including that of major. Unless especially authorized by the officer in charge of the aviation section, all successful applicants for commissions in the aviation section, Signal Officers' Reserve Corps, will be commissioned in the grade of first lieutenant.

2. Any male citizen of the United States, not under 21 nor over 30 years of age, desiring a commission in the aviation section, Signal Officers' Reserve Corps, will submit a letter in the following form to The Adjutant General, United States Army, to the adjutant of the department in which the applicant

lives, or to the officer in charge of the aviation section, Signal Corps of the Army:

Letter of application for examination for commission in Officers' Reserve Corps.

(Under section 37, act of June 3, 1916.)

-----, -----, 19--.

The -----

SIR: I have the honor to apply for examination for a commission as ¹----- of '-----' in the Officers' Reserve Corps, organized under the authority of Congress.

I have served ----- years in '-----'

I have pursued a regular course of instruction for ----- years in '-----'

I graduated in the year ----- from '-----', after having creditably pursued the course of military instruction therein provided.

I was born -----, -----, and am '-----' a citizen of the United States. My business is ----- My experience is ----- I inclose letters of recommendation and addresses of citizens who know me as follows: -----

Respectfully,

The correctness of the statements above made was sworn to and subscribed before me, -----, 19--.

The communication authorizing the examination of the applicant will be sufficient authority when submitted to the president of the examining board before which the applicant will be ordered to appear. This board will consist of from two to five commissioned officers of the Regular Army of the United States, or of regular and reserve officers of the Signal Corps, including at least one and not more than two medical officers; at least one officer of the Regular Army will serve on each board. This board will be appointed on the recommendation of the officer in charge of the aviation section of the Signal Corps of the Army.

Each applicant will be subjected to the same physical examination as is required of officers of the Regular Army applying for aviation duty. Applicants will not be examined mentally, but the equivalent of a college education will be required. The examining board will consider documentary evidence submitted by the applicant. It may seek additional information by practical tests, personal questions, or by procuring additional documentary evidence. Flying ability will be given first consideration, noted and reported in the proceedings of the board. No applicant for a commission as an officer of the aviation section, Signal Officers' Reserve Corps, will be considered proficient until he is able to pass the flying test for reserve military aviator, unless specially excepted for reasons stated by the officer in charge of the aviation section, Signal Corps of the Army.

After the required examination, the proceedings of the board will be forwarded to the headquarters of the convening authority, with the recommendations of the board as to the qualifications of the applicant. The officer in charge of the aviation section, Signal Corps of the Army, will recommend to The Adjutant General the grade in which each candidate should be commis-

¹ Insert grade.

² Insert branch of service, staff corps, or department, as Cavalry, Field Artillery, Coast Artillery, Infantry, Quartermaster Corps, etc.

³ Name staff position, and in this case rule out 1 and 2.

⁴ Insert service in Regular Army of the United States, or Volunteer forces of the United States, or Organized Militia of any State, Territory, or District of Columbia; also state in what capacity.

⁵ Insert name and location of school or college.

⁶ Insert the name and location of the educational institution in which an officer of the Army or Navy has been detailed as superintendent or professor pursuant to law.

⁷ Insert "not" if in accordance with fact.

⁸ Oath to be taken before, and signature to be made by, officer authorized by law to administer oaths.

NOTE.—The foregoing is the form to be followed in applying for examination and is to be addressed to the adjutant of the department in which the applicant lives, The Adjutant General of the Army, or the head of the staff corps or department concerned.

sioned. After appointment by the President, The Adjutant General will issue the commission. The commissions of the officers of the Officers' Reserve Corps will be in force for a period of five years, unless sooner terminated at the discretion of the President. Such officers may be recommissioned either in the same or higher grades for successive periods of five years, subject to such examination as may be prescribed.

In time of actual or threatened hostilities, officers of the Officers' Reserve Corps are subject to such duty as the President may prescribe. The officer in charge of the aviation section, when authorized by the Secretary of War, may order reserve officers to duty for periods not to exceed 15 days a year, and while so serving such officers will receive the pay and allowances of their respective grades in the Regular Army.

With the consent of the reserve officers concerned, and within the limit of funds available for the purpose, officers of the Officers' Reserve Corps will be retained on active duty for such periods as the Secretary of War may prescribe.

In order to qualify for examination as officers of the aviation section, Signal Officers' Reserve Corps, especially qualified citizens of the United States not under 21 nor over 27 years of age will be assisted by the United States as follows: To become eligible for obtaining such instruction, the person desiring it shall make application to the officer in charge of the aviation section, Signal Corps, who, if the applicant is considered desirable, will cause such applicant to be examined by the same board convened for the examination of officers of the aviation section, Signal Officers' Reserve Corps, which board will pass on the applicants' physical, mental, and moral qualifications. The physical test shall be the same as that required for officers of the aviation section of the Signal Corps. In the mental test the applicant will be required to establish the fact that he has the equivalent of a college education. The moral test will require the applicant to establish his reliability and good habits. The candidate will be required to state in writing that if he successfully passes his aviation tests he will become an officer in the aviation section, Signal Officers' Reserve Corps. If the candidate successfully passes, the board will so recommend to the officer in charge of the aviation section, Signal Corps. The officer in charge of the aviation section, Signal Corps, will then designate the applicant as an aviation student. If the student desires to enlist in the aviation section of the Enlisted Reserve Corps he will be made a noncommissioned officer and placed on active duty up to the time his course is finished and he is discharged to accept a commission in the aviation section, Signal Officers' Reserve Corps. If he fails in his course, he may apply for his discharge from the aviation section of the Enlisted Reserve Corps. If the student does not desire to enlist he may attend the course as a civilian at his own expense. The aviation student will then be assigned by the officer in charge of the aviation section to a school for his instruction. Such school may be either a United States aviation school or a civilian aviation school. The civilian aviation school will be one approved by the officer in charge of the aviation section, Signal Corps, as to instructors, machines used, and character of instruction given. The manufacturers' schools shall receive \$500 for each aviation student who qualifies for the preliminary flying test, the test to be conducted by an officer or agent of the aviation section of the Signal Corps. For any aviation student who qualifies as a reserve military aviator upon graduation from a civilian aviation school an additional \$300 will be paid to such school. Upon the candidate satisfactorily passing the reserve military aviator's test he will receive a commission as an officer in the aviation section, Signal Officers' Reserve Corps, without further examination.

It is the intention gradually to organize reserve aero squadrons in various parts of the country from the commissioned and enlisted reserve personnel.

APPENDIX B.

REQUIREMENTS FOR SERVICE IN THE ENLISTED RESERVE CORPS, AVIATION SECTION, SIGNAL CORPS.

Qualifications.

1. *General requirements.*—Service in the Enlisted Reserve Corps, aviation section, Signal Corps, is by enlistment. Applicants must not be under 18 nor over 45 years of age. They must be of good antecedents and habits and free

from bodily defects and diseases. They must be citizens of the United States or have made legal declaration of their intention to become citizens of the United States and be able to speak, read, and write the English language. Before enlisting, they are required to pass physical examination to determine their fitness for service in the United States Army. Before authority for enlistment is granted the applicants will furnish two or more certificates of good moral character. As the service is technical, men qualified as aviators, balloonists, or mechanics, who have had experience in the construction and repair of aeroplanes or internal-combustion engines, are particularly desirable.

2. Following are the numbers authorized in each grade:

- (1) 54 master signal electricians.
- (2) 190 sergeants, first class.
- (3) 271 sergeants.
- (4) 543 corporals.
- (5) 1,381 privates, first class.
- (6) 276 privates.

2,715 total.

3. Qualifications for enlistment direct into each of these grades are as follows:

- (1) Candidate must have a working knowledge of gasoline motors, magnetos, carbureters, telegraphy, and a fair knowledge of the principles of electricity and photography.
- (2) Working knowledge of motors, magnetos, and carbureters.
- (3) and (4) A general knowledge of subjects given under (1) and (2) and have sufficient training and interest to show that he is adaptable to work of this kind.

(5) Applicants must show an interest in the subjects mentioned, be competent, and keen, to insure that he will develop along the proper lines in training.

When men enlist in any of the above grades, certificates of enlistment in the Enlisted Aviation Reserve Corps will be issued by The Adjutant General of the Army. The certificates will confer upon the holders when called into active service or when called for purposes of instruction and training, and during the period of such active service instruction or training, all the authority, rights, and privileges of like grades of the Regular Army. Members of the Enlisted Reserve Corps, aviation section, Signal Corps, shall take precedence in said corps according to dates of their certificates of enlistment therein, and when called into active service, or when called out for purposes of instruction and training, shall take precedence next below all other enlisted men of like grades in the Regular Army. The President is authorized by law to assign members of the Enlisted Reserve Corps, aviation section, Signal Corps, as reserves to particular organizations of the Regular Army. The Secretary of War is authorized by law to order enlisted men of the Enlisted Reserve Corps, aviation section, Signal Corps, to active service for purposes of instruction or training for periods not to exceed 15 days per year, provided that, with the consent of such enlisted men and within the limits of funds available for such purposes, such periods of active service may be extended for such number of enlisted men as may be deemed necessary. Enlisted men will receive the pay and allowances of their respective grades in the Regular Army, but only when ordered into actual service, including the time required for actual travel from their homes to the places to which ordered and return to their homes.

4. Rates of pay.—The grades and pay of the enlisted force of the aviation section, Signal Corps, United States Army, are as follows:

	While serving in the United States, Hawaii, Porto Rico, or the Canal Zone.	While serving in Alaska, China, or the Philippines.
	Per month.	Per month.
Master signal electricians.....	\$75.00	\$90.00
Sergeants, first-class.....	45.00	54.00
Sergeants.....	36.00	43.20
Cooks.....	30.00	36.00
Corporals.....	24.00	28.80
Privates, first-class.....	18.00	21.60
Privates.....	15.00	18.00

In addition to the above there will be a slight increase per month after each enlistment period of four years. All enlisted men, in addition to their regular pay, receive rations, quarters, clothing, fuel, bedding, medicine, and medical attendance when required.

When called into active service of the United States members of the Enlisted Aviation Reserve Corps will receive the rate of pay corresponding to their grade.

5. *Retirement.*—Enlisted men of the Aviation Reserve Corps will not be entitled to retirement or to retired pay, nor will they be entitled to pension except in case of physical disability incurred while on active service or while traveling under orders of competent authority to or from designated places of duty.

6. *Uniform.*—The uniform to be worn by the enlisted men of the Enlisted Reserve Corps, aviation section, Signal Corps, except corps insignia, shall be the same as prescribed for enlisted men of the aviation section, Signal Corps of the Regular Army Reserve. In time of peace there shall be issued to each enlisted man of the Enlisted Reserve Corps, aviation section, Signal Corps, such articles of clothing and equipment as may be prescribed. All clothing and equipment shall remain the property of the United States.

7. *Term of enlistment.*—The term of enlistment is four years.

APPENDIX C.

REQUIREMENTS FOR CIVILIAN AVIATION SCHOOLS.

(An inspection will be made by an officer of the aviation section of the Signal Corps to determine whether the requirements are fulfilled.)

1. *Field.*—The field should be of sufficient size and shape to permit of landing and getting away in at least two different directions under normal conditions. The ground must be fairly level and free from obstructions of all kinds. These requisites will be determined on inspection by an officer or agent of the aviation section of the Signal Corps.

2. *Training machines.*—The training machines will comply with the specifications prescribed by the aviation section for the preliminary and advanced training types. These specifications will be furnished all civilian schools who instruct students for the Government, or desire to do so.

3. *Instructors.*—Instructors must be men of experience in flying and thoroughly competent to teach through the reserve military aviator stage. They should be level-headed, have good judgment, and sufficient mental balance to impart what they know.

4. *Character of instruction.*—The course of instruction will be divided into two stages. The first stage will include instruction and qualification through and to include the preliminary flying test. This test will be held under the supervision of an officer or agent of the aviation section of the Signal Corps. The second stage, which is optional with the school authorities, will consist of advanced training necessary to qualify an aviation student as a reserve military aviator. An advanced training type of machine will be used at least during the last stages of this instruction. Detailed information as to the course to be followed in this stage will be furnished the school authorities. The reserve military aviator test will be held under the supervision of an officer or agent of the aviation section of the Signal Corps.

5. *Preliminary flying test.*—(a) Three sets of figure eights around pylons 1,600 feet apart. In making turns around pylons all parts of machine will be kept within a circle whose radius is 800 feet.

(b) Stop motor at a minimum height of 300 feet and land, causing machine to come to rest within 150 feet of a previously designated point.

(c) An altitude test consisting of rising to a minimum height of 1,000 feet.

(d) Glides with motor throttled, changing direction 90 degrees to right and left.

NOTE.—(a) and (b) may be executed in one flight; (c) and (d) in one flight. The same rules apply in starting from and landing on water. Special attention will be paid to the character of landings made.

Should any aviation student desire to take the pilot license test prescribed by the Aero Club of America, every facility will be offered for him to do so.

Report of these tests will be submitted to the officer in charge of the aviation section, with the information as to whether or not the school will complete training of the aviator through the reserve military aviator stage.

6. *Reserve military aviator test* will be as follows:

(a) Climb out of a field 2,000 feet square, and attain 500 feet altitude, keeping all parts of machine inside of square during climb.

(b) Glides at normal angle, with motor throttled. Spirals to right and left. Change of direction in gliding.

(c) At 1,000 feet, cut off motor and land within 200 feet of a previously designated point.

(d) Land over an assumed obstacle 10 feet high and come to rest within 1,500 feet from same.

(e) Cross-country triangular flight of 30 miles, passing over two previously designated points. Minimum altitude 2,500 feet.

(f) Straight-away cross-country flight of 30 miles. Landing to be made at designated destination. Both outward and return flight at minimum altitude of 2,500 feet.

(g) Fly for 45 minutes at an altitude of 4,000 feet.

7. *Pay for tuition*.—Upon the student passing the preliminary flying test satisfactorily the school will be paid \$500. If the student is continued under instruction until he satisfactorily passes the reserve military aviator test, an additional \$300 will be paid the school.

8. All candidates for the aviation section, Signal Officers' Reserve Corps, will be required to pass the prescribed physical examination, must weigh not more than 190 pounds, stripped, must furnish evidence of having a college education, and be of good moral character.

9. Applicants for commissions as reserve officers who hold the pilot certificate of the Aero Club of America, will, after successfully undergoing the prescribed physical examination, be given a flying examination embodying at least the requirements of the preliminary flying test. If competent, they may also take the reserve military aviator's test.

If the preliminary flying test is passed satisfactorily and a candidate qualifies in other respects, he will be eligible for further instruction to qualify as a reserve military aviator.

If, in addition to the preliminary flying test the candidate also passes the reserve military aviator's test satisfactorily, he will be given a commission in the aviation section, Signal Reserve Corps, provided all other qualifications are fulfilled.

APPENDIX D.

DETAIL OF OFFICERS AND ENLISTED MEN OF THE NATIONAL GUARD AT SIGNAL CORPS AVIATION SCHOOLS.

Officers and enlisted men of the National Guard may be detailed at Signal Corps aviation schools under section 99 of the national defense act. National Guard officers and men desiring such course will apply to the adjutant general of their State, who will forward the applications direct to the Chief, Militia Bureau, War Department, Washington, D. C. Such officers and enlisted men will be required to pass the prescribed physical and mental examinations which will be similar to those required of reserve officers, aviation section, Signal Officers' Reserve Corps. On approval by the Militia Bureau, orders will be requested from The Adjutant General of the Army, assigning such officers or enlisted men to duty at aviation schools.

The plans for the equipment of our foreign possessions with proper aero units are being carried out. The equipment for these units consists of hydroaeroplanes. Suitable ones are very difficult to obtain, but specifications covering high-powered machines of this character are now being sent out, and it is hoped within the near future to have adequate equipment along this line.

It is believed that the arrangements made will result in a growth of this branch of the service, which will not only be rapid, but which will be based on such sound principles as will be able to stand the

test of any emergency. The field is an entirely new one for the United States Army, and there is no precedent to follow. As a result, therefore, it can not be foretold with certainty what time will be required to train personnel or develop material. Every known agency, however, for the development of both of these elements is being made use of in this country.

However, the experience gained in this country and the reports received from abroad indicate that a number of changes and additions will be necessary in any contemplated organic law for a separate air service, but the Chief Signal Officer stands ready to submit recommendations for such changes whenever the question is taken up.

The plan of the General Staff, approved by the Secretary of War, contemplates, and as I think very properly, the eventual separation of the aviation service from the Signal Corps. The separation of this service from any technical corps should take place when the air service is capable of standing alone. This time has not yet come.

In conclusion, I desire to report that all of the recommendations contained in my last annual report have been carried out with the exception of those relating to a detail system of officers for the Signal Corps, additional pay for enlisted telegraph operators, and increased salary for the position of chief clerk. These I renew and urgently recommend favorable action.

GEORGE P. SCRIVEN,

Brigadier General, Chief Signal Officer of the Army.

THE SECRETARY OF WAR.

REPORT OF THE CHIEF OF THE MILITIA BUREAU.

REPORT OF THE CHIEF OF THE MILITIA BUREAU.

WAR DEPARTMENT, MILITIA BUREAU,
Washington, D. C., October 1, 1916.

SIR: The following annual report concerning the Organized Militia and National Guard affairs is submitted. The report is brought up to date as far as practicable; however, the mobilization of the National Guard is touched on only incidentally and in fiscal matters the report is made to include June 30, 1916, only.

GENERAL REMARKS.

According to the latest returns prior to June 18 the total reported strength of the Organized Militia and the National Guard is 8,589 commissioned officers and 123,605 enlisted men, a decrease over last year of 116 officers and an increase of 2,932 enlisted men. Of this force 1,451 officers and 6,131 enlisted men belong to the staff and noncombatant branches, 456 officers and 8,084 enlisted men belong to the Coast Artillery, and 6,682 officers and 109,390 enlisted men belong to the mobile branches (Engineers, Field Artillery, Cavalry, and Infantry). The plan of organizing the mobile troops with auxiliary forces of the National Guard into 12 tactical divisions has made some progress since last year. However, no division is complete. The division in the State of New York, and the one in Pennsylvania are the most advanced in divisional organization, though on June 30 both were deficient in auxiliary units. The most striking deficiency in the divisions called out from the States of New York and Pennsylvania was in machine guns, there being at the date of call only 8 machine guns with the New York division when there should have been 40. In Pennsylvania there was a complete deficiency of 40 machine guns. In trained personnel, there was a greater lack than in machine guns and equipment. On a divisional basis there is an excess of Infantry units equivalent to 17 regiments and a deficiency in other elements as follows: Fifty-two troops of Cavalry, 58 batteries of Field Artillery, 49 companies of machine guns, 8½ battalions of Engineers, 26 field hospitals, 17 ambulance companies, 12 medical-supply detachments, and 17 sanitary detachments. There is a deficiency in Coast Artillery of 261 officers and 9,239 enlisted men based on Table 3, O. C. S., C. A. D., September 17, 1915. There is a deficiency in the total numerical strength of the National Guard of 18,195 enlisted men below the minimum authorized peace strength.

The mobilization of the major portion of the National Guard under call of June 18 was not completely accomplished until after the termination of the fiscal year. Data have been collected with regard to it and these data, with a study of measures to be taken with a view to facilitating and expediting mobilization, will be made the subject of a separate report at a later date.

Organizations called into the service of the United States on May 9, 1916, and June 18, 1916, were as follows:

Infantry, 108 regiments and 7 separate battalions.

Cavalry, 3 regiments, 13 separate squadrons, and 22 separate troops.

Field Artillery, 6 regiments, 12 separate battalions, and 17 separate batteries.

Engineers, 3 battalions and 11 separate companies.

Signal, 4 battalions, 16 separate companies, and 1 aero company.

Sanitary troops, 23 ambulance companies and 37 field hospitals.

Of the organizations shown there were already organized on June 18, 2 Infantry divisions, 19 Infantry brigades, and 1 Artillery brigade. On July 31, 1916, reports show that 110,957 were on the border and 40,139 in State mobilization camps, an aggregate of 151,096. The aggregate strength was short the authorized minimum peace strength 4,083, and short, war strength, 97,350.

Forty-four officers of the Regular Army were commissioned in the National Guard in the service of the United States, 3 as brigadier generals, 10 as colonels, 27 as lieutenant colonels, and 4 as majors. Noncommissioned officers of the Regular Army were commissioned in the National Guard in the service of the United States as follows: Thirty-four in Infantry, 9 in Cavalry, 8 in Field Artillery and 1 in Signal Corps. Two major generals and 24 brigadier generals of the National Guard, in addition to the 3 brigadier generals commissioned in the National Guard from the Regular Army, were mustered into the service of the United States.

Reports show that 85 per cent of the numerical strength of the National Guard were present at the annual armory inspection, and that 56,563 officers and enlisted men, or about 43 per cent, of the reported strength, attended at least 24 drills of one hour and a half each during the year. Six special camps of instruction were held for officers and noncommissioned officers at which there were present 283 commissioned officers and 441 noncommissioned officers. Other camps of instruction which were planned had to be abandoned on account of the call into the service of the United States.

Reports on small-arms target practice for the calendar year 1915 are incomplete. Four States have submitted no reports. In the remaining States of a strength of 108,561 men armed with the rifle only 63,841, or 58 per cent, fired range practice. This is a slight improvement over 1914. In general, instruction in small-arms firing is still unsatisfactory. In the present calendar year 128 companies of Coast Artillery attended camps of instruction at or near coast-defense batteries. The reports on 46 of these companies have been received at this date and show that 72 per cent of these organizations had service practice, the remainder being prevented from firing by reason of fog. Six batteries of Field Artillery attended camps of instruction and one battery had service practice prior to the call of June 18, 1916.

During the past fiscal year the system of property accountability has been unsatisfactory in the survey and disposal of unserviceable property and the enforcement of strict rules of accountability; however, it is believed that the act of June 3, 1916, will remedy these defects partially if not wholly. There was a deficiency of 87 wagons with harness to equip the field and combat trains for the existing units called into the service of the United States. Available funds were used during the year to decrease the deficiency shown last year. Three hundred and ninety-nine horses were purchased and issued to the Field Artillery and are available at all times for the use of 102 batteries.

The force of the act of June 3, 1916, can not be measured in full at this time. The effect of this act as a whole can not be other than beneficial in rendering the National Guard a more effective force for the United States. Briefly, it enables the Militia Bureau—

1. To enforce a strict responsibility for property.
2. To more effectually control the expenditure of funds.
3. To specify the requirements for pay for armory service as well as for service in camps of instruction.
4. To prescribe the training and attendance for organizations.
5. To insist upon the keeping of the necessary records.
6. To make uniform and effective the physical examinations.
7. To inquire into and specify the qualifications for officers.
8. To prescribe thorough organization of all units.
9. To control the organization, and the proportion, of units in the different arms of the service.
10. To increase the number of horses for instruction of Field Artillery.
11. To provide horses for the instruction of Cavalry.
12. To increase the number of commissioned and noncommissioned officers of the Regular Army as instructors for the National Guard.
13. To provide for additional instruction visits by inspector-instructors and sergeant-instructors on all units.

Owing to the brief interval between the approval of this act on June 3 and the date, June 18, when the greater portion of the Organized Militia and the National Guard were called into the service of the United States, no time was afforded for the adequate study of the new law and the determination of its exact application. The essential difference between the old Organized Militia law and the new National Guard law lies in the new oath of allegiance to the United States. The conversion of the Organized Militia into National Guard had not been completely accomplished on June 18. The effect of pay for armory service in view of the increased requirements is yet to be determined and its full effect can not be judged until the National Guard in the service of the United States has been mustered out and has resumed its normal peace training. The plan of organizing the mobile and auxiliary troops of the National Guard into 12 tactical divisions will be modified both as to organizations specified and as to geographical distribution in order to adapt it to this act. A few men have passed from three years' service into the National Guard Reserve. The growth and control of the reserve are to be studied with interest. Regulations are now being prepared to put into full effect the provisions of this

new law. An increase in the number of officers and noncommissioned officers of the Regular Army as instructors for the National Guard and a closer association of the National Guard with units of the Regular Army at summer camps of instruction should greatly improve the discipline and training of the National Guard. These advantages have been provided for by the new law in a greater degree than ever before and it is to be hoped that the Regular Army may be found to be available to meet every demand made upon it in these respects. If, after all that has been provided by law in the way of facilities and inducements, there is inability to attain a reasonable degree of efficiency, the failure must be attributed to defects inherent in the militia system which are beyond correction by legislative action.

The subjects included in this summary, except the mobilization of the National Guard, are treated more fully under appropriate heads in the body of the report.

ORGANIZATION.

The act of June 3, 1916, has made important and far-reaching changes in the organization of the National Guard, and the Federal Government now has the requisite authority to prescribe the particular units as to branch or arm of service to be maintained in order to secure a force which, when combined, shall form complete higher tactical units. The necessity for the proper quota of auxiliary troops, which are and have always been deficient in the National Guard, due to the desire of the several States to maintain Infantry units, has been brought forcibly to the attention of military authorities by the events of the war in Europe, and the new organization for the National Guard requires additional Field Artillery for Infantry divisions.

It must be accepted as a principle that the quota of auxiliary troops required for the higher tactical organization of the National Guard should be provided before additional Infantry organizations should be formed, although existing Infantry organizations in States where the eventual requirements of the act of June 3, 1916, will require their continued existence should not be disbanded except where the conditions in a particular State require a transfer to some other organization. Although there is authorization in the law for the completion of the complete five years' quota for each State, this provision must be considered in connection with the efficiency of existing organizations, and estimates made for their supply and payment.

The past year has shown a slight increase in the auxiliary troops required for the higher tactical organizations of the National Guard, which was accentuated to some extent by the mobilization of the National Guard in response to the President's call of June 18, but nevertheless the program of 12 tactical divisions first published to the militia in 1914 is yet far from completion, and, except in the States of New York and Pennsylvania, is unfinished, through the general reluctance or inability of the States to organize and maintain the necessary auxiliary troops.

There has been no great increase in auxiliary troops except in the States mentioned above, and the deficiency not only in Artillery, Cavalry, and Engineers, but in the supply train personnel is marked, and is the greatest obstacle to the proper tactical organization of the National Guard of the country.

There is still a surplus of Infantry for the 12-division plan, and nearly enough to complete the organization of the National Guard which may reasonably be expected by the end of five years.

With a few exceptions the average enlisted strength at which organizations have been maintained during the past year is too low for effective military training, and as a result the number of commissioned officers is entirely too large for the strength of enlisted men. This represents small organizations, weak in enlisted men and calls for a large number of recruits upon mobilization, whereas a proper basis would be to have fewer organizations, at a higher effective strength.

The present minimum strength fixed by the War Department is too low for effective organizations and will eventually be raised to the peace strength of similar organizations in the Regular Army, representing an increase of approximately 35 per cent in Infantry and Coast Artillery organizations, but only about 5 per cent in the Cavalry and Field Artillery. The advantages of large organizations as effective military units are manifest and beyond argument. Not only will the National Guard units be in a better position to respond for Federal service, and have sufficient men to undergo proper training, but they will also turn a large number of men into the reserves, and the cost of maintenance, including pay and equipment, will be put to a better purpose. The overhead charges in a small regiment are practically the same as a large regiment, since the number of officers is the same and the number of noncommissioned officers is only slightly smaller, while the privates are the men required to fight battles, and they should be trained in time of peace. The fewer enlisted men that are required to recruit organizations after the call for service has gone forth the better.

The new organization set forth in the act of June 3, 1916, particularly in respect to regiments, represents a distinct advance in that the several provisional units, such as machine-gun, headquarters, and supply companies, are now permanent organizations in a regiment, and the obvious disadvantages of the detailed system has been done away with. Full conformity to the new organization will be required of all National Guard regiments prior to July 1, 1917.

New organization tables for the Regular Army conforming to the provisions of the act of June 3, 1916, are now being prepared by the War Department. With the exception of the authorized minimum strength, they will govern the organizations of the National Guard and will obviate the necessity for the preparation of separate tables. As a war measure the organizations of the National Guard should conform as near as practicable to that prescribed for the Regular Army.

INFANTRY.

ORGANIZATION.

The organization has been changed but little in the past year. The policy of encouraging the transforming of excess Infantry into auxiliary arms so as to produce a balanced force has been adhered to, as well as that of inducing Infantry regiments to adopt the provisional organization of a headquarters, a supply, and a machine-gun company. The progress along these two lines is encouraging, though not great, and will be increased materially through the required compliance with the act of June 3, 1916.

STRENGTH.

The prescribed minimum enlisted strength for the Infantry company is to be 65 until June 30, 1917, after which the minimum should be raised as rapidly as is possible until a strength of 100 is reached. Many companies were below 65 at the last annual inspection, and these were again warned that such deficiency would not be further tolerated, for the reason that an organization without a proper strength is of little Federal value and does not afford the necessary instrumentality for the proper training of the commissioned officers. As a result of the annual armory inspection held in January, February, and March, 1916, Federal recognition was withdrawn from a large number of companies which were deficient and in which there was no reasonable promise of improvement, and a larger number were placed on probation, as they were not efficient for Federal purposes.

The deficiencies in almost all cases were due to the lack of trained officers, which meant the corresponding lack of training and a consequent lack of interest on the part of enlisted men.

To afford reasonable means of complying with the new law as to the increased quota in congressional districts and the requirements as to the strength of companies, it is advisable that towns where conditions are favorable be allowed to raise parts of companies when it is found difficult to raise an entire company in any one place.

No detachment should consist of less than four squads and one officer (35 men, a war strength platoon). An examination of the inspection reports of previous years shows that this is just about the strength that many towns turn out for an ordinary company drill assembly. These detachments should have permanent armories, so that property can be cared for properly, and there should always be a commissioned officer to insure proper supervision.

THEORETICAL AND ARMORY INSTRUCTION OF INFANTRY.

There has been much commendable effort made to advance the theoretical instruction of Infantry, but an examination of the annual reports indicates that in many cases such instruction suffers materially through the lack of trained officers and noncommissioned officers, and a larger effort must be made in their instruction, for without competent officers and noncommissioned officers, and intelligent supervision on the part of field officers, military efficiency can not be attained.

The theoretical and armory instruction should be based more upon the idea of teaching in and about the armory, the fundamentals upon which the field instruction can be built up, looking outward to field work, rather than limiting the drill and thought to those things which heretofore have been practiced in armory instruction and which have not proved sufficiently interesting to hold the attention and interest of the enlisted men. The latter will more readily and frequently attend drills and give their attention if they feel they are actually being taught those things that prepare them to be soldiers in the field than if they are put through only disciplinary exercises, which an ill-prepared officer may continue and repeat without exposing his ignorance.

More attention should be given to actual physical training in armory instruction; a lively period of 10 or 15 minutes as a regular part of the instruction will be of great physical value to the individual.

The theoretical instruction of officers has made some progress, but the authorization of the use of textbooks while preparing answers in the correspondence school course has not had a good effect, and it is evident that this method will have to be abandoned.

PRACTICAL INSTRUCTION.

During the period covered by this report, outside of the instruction in armories, the practical instruction of Infantry has been confined to camps of instruction for officers and noncommissioned officers and State camps of instruction. A camp of instruction for officers and noncommissioned officers that seemed to be quite successful was one in which the officers and noncommissioned officers were organized as a provisional company and given as such all the detailed instruction pertaining to it and were required to undergo the drill of subordinates. It is thought that such camps of instruction would prove of large value if more generally held.

In order to indicate to organizations what they would be required to undergo in their field camps of instruction, advance sheets covering that part of the field inspection report which pertains to instructions were sent out by the Militia Bureau, so that commanders might not be taken by surprise nor waste their efforts in other undertakings than those which the Militia Bureau thought profitable in field training. A bulletin was also prepared calling attention to the need of enlisted cooks in the companies, so that they might be free from the former system of hiring cooks and become efficient in this important part of military instruction.

The calls to Federal service on May 9 and June 18, 1916, disorganized the plans of many organizations, so that it would be unprofitable to attempt to make a detailed comparison of the kind and degree of instruction in the different States. The act of June 3, 1916, with the added requirements of 48 drills and 15 days' field instruction, should mean a considerable future progress.

The statement that "the main body and basis of an army is the Infantry" is as true as ever, and will continue to be so as far as one can see, but it is the more and more necessary that they should be well trained in all those things which would make efficient infantry, some of which are good marching ability; marksmanship; ability to take care of oneself in the field, both in a tactical and in an administrative way; to scout; to find one's way; to dig a trench; to observe the enemy; to communicate information; to prepare food; to protect oneself against the elements; and to conserve one's energy against disease. The officer must, in addition, understand how to direct, control, and protect the organization, so that the combined individual effort will be used to advantage.

The nearer we can approach the imparting of all instruction by the officers responsible for the organization the better will be the results. Too much dependence should not be placed upon the inspector-instructors, for by so doing the personnel instructed deprive themselves of the legitimate growth that they are entitled to in the exercise of their normal functions.

If officers and noncommissioned officers are new to their office, they should be given a short and comprehensive course of intensive training to prepare them for their positions before entering upon their new duties. If they are interested and capable, it will be of great benefit, and if they are not their deficiencies will appear and steps should be taken for their elimination.

CAVALRY.

The plan of organization set forth in Circular No. 19, Division of Militia Affairs, series of 1914, calling for 27 regiments of Cavalry for the National Guard, has been followed during the past year, and there has been an addition of 21 troops and 2 machine-gun troops, and the disbanding of 5 troops, making the equivalent of $9\frac{1}{2}$ regiments of Cavalry in existence on June 30, while the organization of 3 regiments has been completed by headquarters, machine-gun, and supply troops. There has been a tendency toward the completion of battle units, such as squadrons, and a consequent reduction in the number of separate troops. This line of progress should be encouraged and, as far as practicable, there should be no Cavalry organizations in a State less than a squadron, unless it be a machine-gun troop, which under existing law is one of the 4 regimental combatant units.

There has been authorized for each separate squadron a detachment from the headquarters, and supply troops, which will serve for administrative and supply purposes, and yet when the provisional regiments are combined the entire regimental personnel, excepting the colonel and lieutenant colonel, will be complete. There is no provision in the act of June 3, 1916, by which such regiments can be combined, except when drafted into the United States service, and this handicap can only be overcome by the expansion of existing Cavalry organizations into complete regiments entirely within the boundaries of a single State.

It may be accepted as a correct principle that the complete Cavalry regiment is the proper basis for organization and will attain a higher grade of efficiency than detachments divided among two or more States.

Under section 90 of the Act of June 3, 1916, there is a provision for the purchase or issue of not to exceed 32 horses for the use of each troop, and provisions are also made for the issue of forage and bedding and for shoeing and veterinary supplies and the employment and pay of not to exceed 5 enlisted men or caretakers and stablemen. It is anticipated that the measures, provided adequate funds are available, will result in increased efficiency of existing Cavalry organizations and as a stimulus for the organization of new units.

The new Cavalry regulations are expected to be published before the commencement of the next outdoor instructional season, and in as much as they embrace not only drill regulations but form a complete manual of cavalry, they should prove of great value to the National Guard.

There has been no marked improvement in armory instruction throughout the past year, and the standard in this form of training is not uniform, and in many instances there is a great lack of thoroughness and a lack of concentration on strictly essential training subjects.

The field instruction during the summer of 1916 has been incident to the muster into Federal service of practically every Cavalry unit of the National Guard and should result in great benefit and the most marked progress in real training of officers and enlisted men. In each instance Cavalry units ordered to the border service have been promptly equipped with their full allowance of animals and transportation, have been provided with competent instructors from the Regular Army, and in many instances have entered upon actual field duties by forming part of the border patrol. At the date of publication full reports of the benefits derived from Federal service have not been received.

The following new Cavalry units have been organized during the past year:

Colorado, 1 troop.
 District of Columbia, 1 troop.
 Hawaii, 1 troop.
 Illinois, 1 machine-gun troop.
 Iowa, 1 squadron.
 Kansas, 1 troop.
 Montana, 1 troop.
 Pennsylvania, 1 machine-gun troop.
 Rhode Island, 1 troop.
 South Carolina, 1 troop.
 Tennessee, 1 troop.
 Texas, 1 troop.
 Utah, 2 squadrons.
 Virginia, 1 squadron.

There has been some improvement in equitation, but no satisfactory progress can be made in this essential form of training until each troop has a sufficient number of mounts to enable it to carry out a systematic course as a part of the armory training. The short period available at camps of instruction can properly be devoted to more advanced training.

The following statement shows the mounts used by National Guard Cavalry at the time of mobilization, June 18, 1916:

Horses owned by State.....	153
Horses owned by private parties.....	579
Horses owned by organizations.....	1,092
Total.....	1,824

These animals were distributed among 88 troops in 20 States. Several States failed to provide mounts for their Cavalry organizations except those hired for purposes of instruction.

Comments on target practice appear under the general subject.

FIELD ARTILLERY.

Due to the influence of the European war and to the mobilization of the National Guard, there has been an unprecedented activity during the past year in both the organization and the training of the Field Artillery of the National Guard.

Since the date of the last report, October 1, 1915, the following new units have been completed:

Massachusetts, one battalion and one regimental headquarters.
Connecticut, five batteries, one headquarters company, and one supply company.
New York, one regiment.
Pennsylvania, two regiments, two batteries, and one regimental and two battalion headquarters.
New Jersey, one battery.
Maryland, one battery.
Virginia, one battery.
District of Columbia, one battery.
Illinois, one battalion and one regimental headquarters.
Colorado, one battery and one battalion headquarters.
Wisconsin, two batteries.
The result shows a gain of 36 batteries.

The following table shows the existing units of Field Artillery and the number required for the 12 National Guard divisions. The shortage is increased over that shown in the last report by the requirement of the Act of June 3, 1916, that an Infantry division shall have three regiments of Field Artillery instead of two, as prescribed by the Tables of Organization, 1914:

Division.	States comprising divisional districts.	Batteries.	
		Organ-ized.	Short-age.
Fifth.....	Maine, New Hampshire (1 battery), Vermont, Massachusetts (1 regi-ment), Rhode Island (1 battery), Connecticut (6 batteries).	14	4
Sixth.....	New York (3 regiments).....	18	.....
Seventh.....	Pennsylvania (3 regiments).....	18	.....
Elghth.....	New Jersey (3 batteries), Delaware, Maryland (1 battery), Virginia (4 batteries), District of Columbia (2 batteries)	10	8
Ninth.....	North Carolina, South Carolina, Georgia (1 battalion), Florida.....	8	18
Tenth.....	Kentucky, Tennessee, Mississippi, Alabama (2 batteries).....	2	16
Eleventh.....	Michigan (2 batteries), Ohio (1 battalion).....	5	13
Twelfth.....	Illinois (1 regiment), Indiana (1 battalion).....	9	9
Thirteenth.....	North Dakota, South Dakota, Minnesota (1 regiment), Wisconsin (3 batteries), Iowa (1 battalion).	12	6
Fourteenth.....	Wyoming, Colorado (1 battalion), Nebraska, Kansas (1 battery), Mis-souri (1 battalion).	7	11
Fifteenth.....	New Mexico (1 battery), Oklahoma, Texas (1 battery), Arkansas, Louisiana (1 battalion).	5	13
Sixteenth.....	Montana, Washington, Oregon (1 battery), Idaho, California (1 bat-talion), Nevada, Utah (1 battery), Arizona.	5	13
	Total.....	108	108

In several cases States have expressed a desire to organize bat-teries, but upon inspection it was found that the armory facilities were inadequate for the safeguarding of the matériel and the instruc-tion of the personnel, and the State authorities were unable to pro-vide or to guarantee the permanency of such facilities. The cost of armories appears to be the principal reason for the failure of most of the States concerned to supply the Field Artillery organizations allotted to them by Circular No. 19, Division of Militia Affairs, 1914. The excess cost of armories for Field Artillery over the cost of armo-ries for other arms has been largely balanced by the extra allotments from Federal funds for this arm. The distribution of the appropria-tion under the act of May 27, 1908, for the fiscal year 1916 was three times as great per man for Field Artillery as for Infantry, and amounted to a total of \$206,099.50 for the former arm. A special appropriation of \$200,000 was also made for the fiscal year 1916 to pay mechanics

and helpers and to purchase forage and other supplies for horses for Field Artillery of the Organized Militia. The law also authorized the purchase of horses for Field Artillery from the allotments to the States under section 1661, Revised Statutes, and the act of May 27, 1908. As a result of these provisions, all batteries were furnished with mechanics to care for the matériel, and those that maintained horses employed a liberal allowance of men to care for the animals. At the time of the mobilization of the National Guard on June 18, 1916, horses were being maintained for batteries and headquarters detachments as follows:

Condemned Regular Army horses.....	159
Horses purchased from Federal funds.....	399
Privately owned horses.....	354
Total.....	912

These animals were distributed among 74 batteries in 24 States. The States of Alabama, California, Georgia, and Texas failed to take advantage of the opportunity to maintain horses for their Field Artillery from Federal funds.

Table 16 gives information as to conditions existing at the inspection in 1916 under section 14 of the militia law.

The most serious deficiency revealed by the reports was the lack of organized and instructed regimental and battalion headquarters detachments. Field Artillery can not perform its functions in war without the specialists who compose these detachments. In order to secure them, it became necessary to make the continued recognition of the delinquent units conditional upon the procurement of a suitable personnel prior to the next inspection.

As a result of the deficiencies revealed by the inspection in attendance at drills, instruction, and armory facilities, it became necessary to withdraw Federal recognition from four batteries and to make the continued recognition of six others conditional upon adequate improvement prior to a subsequent inspection. The batteries from which recognition was withdrawn were reorganized with an improved personnel and those that were conditioned were mustered into the service of the United States before the expiration of the probationary period.

In some cases it appeared that the horses issued to organizations were not being used for the training of the members in mounted duties and exercises but that they were largely devoted to riding on the road for pleasure or to exercises of little military value. Such units were informed that a failure to comply with the purposes for which the horses were issued would result in the withdrawal of the animals and of the supplies and allowances authorized for their maintenance.

There is a general deficiency in revolver and subcaliber practice. In many cases improvement could be made by the construction of ranges at or near the armories.

While the total enlisted strength in many units still remains far below the peace strength, there was a marked improvement in the attendance at drills, due probably to the system of credits for such attendance on the ratings of organizations, as published in Circular Letter 52181.4, Division of Militia Affairs, 1915.

The allotment of Federal funds for the payment of mechanics has resulted in a great improvement in the care of the material. No deficiency of this nature was reported during the year.

ARMORY INSTRUCTION.

On account of the limited allotments to the Division of Militia Affairs for the travel of inspector-instructors during the fiscal year 1916, it was necessary to restrict their presence with each unit to only three visits. In order to utilize the time to the best advantage, the following course for armory instruction was prescribed:

(a) Instruction and examination of officers and enlisted men for qualifications as gunners.

(b) Instruction and examination of batteries in the proficiency of the gun squads, and, where horses were available, in the proficiency of the drivers and the horsemanship of the personnel.

(c) Correspondence courses for officers and noncommissioned officers in the basic course, prescribed by Circular No. 3, Division of Militia Affairs, 1914, with the addition of chapter 5, Part III, Drill Regulations for Field Artillery, the employment of special details and special methods for determining firing data. Officers who were known to be proficient in the subjects named were authorized to take a correspondence course in the subjects prescribed for year A. Each course included instruction and examination in the solution of map problems involving the employment of Field Artillery.

The effect of this order was to arouse extraordinary enthusiasm on the part of a portion of the Field Artillery. In some cases the demand for the services of the inspector-instructors to conduct examinations soon became so great that they found it impossible to conduct correspondence courses or to give instruction in gunnery. Some States generously made up the deficiencies of the War Department in the allowances for travel and cheerfully paid the expense of the instructors for extra visits. Notwithstanding every effort, many of the candidates for gunners could not be examined and the examination of a part of the officers who studied the basic course could not be completed.

The reports of examinations during the instruction year 1915-16 showed a qualification of 510 expert first-class gunners, 681 first-class gunners, and 369 second-class gunners, making a total of 1,560 in the entire Field Artillery.

The gunnery qualifications have been published in Circular No. 8, Militia Bureau, 1916, and the men whose names appear in the circular are entitled to the pay of their qualifications when in the service of the United States or when attending camps of instruction until the period for the next examination.

Unfortunately, the instruction of National Guard officers has not progressed as satisfactorily as that of the enlisted men, and the number who qualified for certificates of proficiency has been disappointing. While this has been due in a measure to the lack of sufficient inspector-instructors to conduct the correspondence courses and the examinations, the neglect of a large majority to qualify as gunners and the fact that a small per cent of the officers did qualify for certificates indicate that there was a general failure to make timely preparation for the examinations.

The names of officers who qualified under the course of instruction are published in Circular No. 17, Militia Bureau, 1916. All of those whose names appear in this circular have received certificates from the War Department, and they will be exempt from examinations

for promotion in the subjects included in the course for a period of five years.

In order to afford some basis for comparison of efficiency of the batteries and the different headquarters details, a scale of ratings was published at the beginning of the instruction year. Values were fixed for (a) strength and length of service of enlisted men at the annual inspection under section 14 of the Militia law, (b) attendance at drills, (c) attendance at joint camps, (d) certificates of proficiency of officers and noncommissioned officers, (e) qualifications in the different classes of gunners, (f) proficiency in armory training, (g) rate of fire at service practice. On account of the mobilization of the National Guard and the conditions that prevented joint camps, it was not practicable to award ratings in subjects (c), (f), and (g). Ratings were given for the remainder of the subjects and the figures for all batteries and headquarters were published in Circular No. 16, Militia Bureau, 1916. It will be seen from this circular that great differences exist in the ratings of different organizations which apparently had equal opportunities. Newly organized batteries could not compete with those previously in existence and are not classified. The result of these comparisons should stimulate those that are backward to greater endeavor and impel those that have excelled to greater exertion in order to retain their leadership. While it is recognized that the system followed may not be entirely satisfactory, it has already produced valuable results.

FIELD TRAINING.

The schedule for armory instruction was conducted with a view to making all National Guard batteries efficient firing units at the joint camps in 1916. Experience has shown that a high degree of proficiency may be obtained at the armories in the mechanism of fire, in the firing battery, and in the employment of special details. All organizations should therefore enter upon their field training with such thorough preliminary instruction that the time may be devoted to mounted duties, tactical exercises, and target practice. To emphasize this requirement, the instruction program for the year prescribed that, in order to receive ammunition for service practice, at least 3 officers in the battery must have received certificates for the basic course and at least 20 enlisted men must be qualified gunners in the battery, including not less than 3 who had qualified in the subjects for headquarters, staffs, etc.

Early in the year 1916 a complete schedule for field training was announced, embracing camps of instruction for officers and noncommissioned officers, joint camps for all batteries, and a large class of officers and noncommissioned officers to attend the school of fire for Field Artillery.

When the time approached for establishing the camps, it was found that no regular troops were available to conduct them. An effort was made to hold the camps without regular troops, but the necessary appropriations could not be obtained. The States were then informed that the encampments could not take place. Unless regular troops can be spared to conduct camps, with horses and instructors, and unless adequate appropriations are made available in time to arrange for attendance of the National Guard batteries at the camps, it will be useless to attempt field training for Field Artillery.

INSPECTOR-INSTRUCTORS AND SERGEANT-INSTRUCTORS.

The success of National Guard training depends so largely upon an adequate and efficient corps of instructors that without them little can be accomplished. The officers and noncommissioned officers of the regular Field Artillery who have been detailed for this duty have maintained the high reputation already established for efficiency and leadership. They have been zealous in the performance of their arduous duties, and by their friendly sympathy with the militia and their mastery of the details of their profession they have held the confidence and the respect of the State officers and troops. As proof that their services have been appreciated by the States, more than half of the officers and eight of the noncommissioned officers were given State commissions when the National Guard was mobilized. Their number, however, has been so inadequate for the task that has been required of them that they not only have been unable to meet the demands, but in some cases the health of officers has been endangered by overexertion. The act of June 3, 1916, has provided extra officers and noncommissioned officers sufficient to furnish at least one inspector-instructor for each battalion and one sergeant-instructor for each battery. The work cannot be accomplished with a less number of officers or noncommissioned officers.

The following extract from the report of the Inspector General of the Eastern Department, with reference to the Tenth Militia Field Artillery, is deemed worthy of special consideration in connection with the training of the Field Artillery of the National Guard:

In my opinion, which is based upon my observations in camps of seven different State troops, the citizen soldier, at the present state of training, will be of little real value on a hasty call into the Federal service unless there is a sufficient number of instructors from the Regular Army on duty with these troops, not only in times of peace at their armories, but also in their camps of mobilization. In most camps I have found that the Regular Army instructors had been taken off their regular duty, and had been made mustering officers. The instruction and training of the troops in such camps were practically at a standstill. The officers were attempting drills to some extent, but they were groping in the dark. Here it is different. The colonel, lieutenant colonel, majors, regimental and battalion staff officers, and one battery commander are officers or noncommissioned officers of the Regular Army, and the work accomplished here is in marked contrast to that accomplished in other camps. Instruction is progressive and methodical, and, above all, thorough. The accuracy of aiming and laying the pieces at artillery drill and the snappiness of the drills rival the work accomplished by Regular Army organizations. The days are so full from early morning until late at night for both officers and enlisted men that it seems as though they could not possibly accomplish more with increased effort, if such increase were possible. They are worked to the limit, but, I think, for a limited time at least, not to excess. After the days work is over, a final assembly of all commissioned officers is held and all mistakes, defects, and irregularities are taken up and discussed with a view to their prevention in the future. Some of these remarks do not appear, at first thought, to come under the caption "Remarks which may serve in appraising the real value of the citizen soldier, etc.," but I have made them here to show that the citizen soldier is of little value on a hasty call, unless they are provided with competent instructors, and I am becoming more and more convinced that the number of instructors which we must use from the Regular Army must be far greater than that which we have used in the past. The instruction of a regiment is not a one-man job. It is too great a task for efficiency, and if we expect efficiency from the National Guard organizations, I believe that one Regular Army officer detailed as instructor with each company or battery is not an extravagance. In the Regular service, we do not think of bringing and keeping a company up to the proper standard of efficiency with one officer, even when he has the advantage of trained noncommissioned officers as assistants. Much less can we expect to take untrained troops and bring them up to, and keep them at, a proper state of efficiency, so that they will be ready for service on a hasty call, with less than one commissioned officer and possibly one sergeant-instructor to a company or battery.

STUDENT ORGANIZATIONS.

In order to meet the wishes of certain colleges for the training of the students in field artillery and to assist the States in the development of this arm of the National Guard, the War Department, during the past few years, extended recognition to batteries in the following institutions: Yale University, University of Illinois, University of Minnesota, Purdue University, and the State Agricultural College of Colorado.

The student members of these organizations showed marked aptitude and manifested a lively interest in both the college and the field training.

While this method was the best that could be adopted under the then existing laws, it was fully recognized that the educational qualifications of college men fit them especially to become officers, and it has been evident that military instruction in colleges should be specialized, with the object of fitting graduates for commissions in the Regular Army, the National Guard, and the Volunteer forces of the United States. Many institutions that desired military training in the technical arms were unwilling to have the students organized as a part of the National Guard. State qualifications as to citizenship also operated to restrict the college membership of State forces. Furthermore, the routine of college life is incompatible with the general purposes of the National Guard, the most frequent function of which has been the performance of police duty in the enforcement of the laws. Business and professional men may undergo brief interruptions in their occupations incident to National Guard service without serious results, but students who are called for any appreciable time from their classes must suffer the loss of a years' progress in their education. Moreover, in order that a National Guard organization may be continually available, its membership must be permanently residents of some locality. During the vacation periods students become widely dispersed, and the National Guard organizations of which they constitute the membership virtually cease to exist. This condition prevailed at the time of the recent mobilization, and the assembly of student units was not only greatly delayed, but the expense involved for many men to return to their commands was prohibitive. Thus, student organizations are not equally available with other portions of the National Guard, and they do not form a homogeneous part of the State forces.

In recognition of the peculiar status of students, and with a view to having the country avail itself of the resources offered by the colleges, Congress embodied in the act of June 3, 1916, the wise provisions for establishing sections of the Reserve Officers' Training Corps in colleges and schools. The effect of this law is to provide a means for preparing young men to become commissioned officers with the least practicable interference with their educational endeavors. During their course of training in this corps they are not liable to the performance of any kind of military duty; at the same time they are being trained theoretically and practically for the performance of duties of officers, without any of the complications that arise in the organization of the National Guard units.

In order to comply with the intent of the law, as well as to give all colleges an equal opportunity to enjoy its benefits, the War College and the Militia Bureau concurred in a proposal prior to the mobiliza-

tion of the National Guard, to replace National Guard units in colleges and schools by sections of the Reserve Officers' Training Corps, and thus transform them from an anomalous to a normal status. It was also proposed to withhold recognition in the future from National Guard units in schools. This principle was embodied in the regulations that have been approved for the government of the Reserve Officers' Training Corps. It would manifestly be unfair to institutions that have voluntarily assumed the burden of National Guard units to deny them the same privilege that is extended to those where no such endeavor has been made. Besides, as has been stated, National Guard organizations were recognized in colleges as a measure of expediency at a time when the laws provided no other means for technical military training. It is only logical, therefore, that this method should be discontinued when a change in the laws provides a method that will be to the interest of the Government, of the colleges, and of the students themselves. In having such organizations pass from the National Guard to the Reserve Officers' Training Corps, the country will not lose their services, but will avail itself of their usefulness in a much greater degree.

In accordance with the foregoing considerations, and in response to an unmistakable public sentiment, expressed by the natural demands of the college officials, the parents, and prominent citizens of the country, the War Department published on July 21, 1916, a policy which stated that student organizations should be mustered out of the service of the United States as soon as practicable after September 1, 1916, and that immediately after being mustered out, Federal recognition would be withdrawn from such organizations. Orders for student units to be mustered out were issued on September 6, 1916. It now remains to complete the policy by withdrawing Federal recognition from these organizations, and thus enabling the States to replace the student members by a different personnel.

COAST ARTILLERY.

Since the date of the last report (Oct. 1, 1915) the following new companies of Coast Artillery have been organized:

District of Columbia, one company.

South Carolina, five companies.

Virginia, two companies.

Maryland, one company.

Washington, four companies.

New York, two companies.

New Hampshire, one company.

Oregon, four companies.

Hawaii, two companies.

One company in New Hampshire was mustered out.

The strength of the National Guard Coast Artillery since 1909, based upon the annual Federal inspections made under section 14 of the militia law, is shown in the following table:

Year.	Officers.	Enlisted men.	Companies.	Average enlisted strength per company.
1909.....	395	6,288	119	53
1910.....	457	6,864	122	56
1911.....	446	6,654	120	55
1912.....	472	7,228	125	58
1913.....	479	7,171	126	57
1914.....	450	7,150	123	58
1915.....	440	7,438	123	60
1916.....	450	8,090	127	64

There are now 147 companies and the total strength of the Coast Artillery, including those companies organized since the Federal inspection for 1916, is 545 officers and 11,010 enlisted men.

The National Guard Coast Artillery is being developed on the theory that in the event of war the various units will serve in fortifications not far removed from their home stations. The particular task set for the Stateforces is to man one-half of the gun and mortar batteries in the continental limits of the United States. This plan will require all of the seaboard States to maintain Coast Artillery, but up to the present time New Jersey, Delaware, Florida, Alabama, Louisiana, and Texas have failed to provide any companies whatever, and several other States do not maintain enough Coast Artillery to contribute effective service in the fortifications located along their coast lines.

The record of enlisted men who have qualified under War Department orders for various grades and ratings shows improvement from year to year, as is indicated below:

	1914	1915	1916
Master electricians.....	2	5	6
Engineers.....	6	8	11
Electrician sergeants, first-class.....	9	9	13
Electrician sergeants, second-class.....	3	8	14
Master gunners.....	2	5	12
Firemen.....	5	8	6
Gun commanders.....	40	63	137
Gun pointers.....	27	37	72
Plotters.....	35	62	121
Observers.....	48	60	157
First-class gunners.....	628	848	909
Second-class gunners.....	579	1,216	1,230

The following table shows the results of service target practice held during the last two years:

	1914		1915	
	Mean range.	Hits.	Mean range.	Hits.
	Yards.	Per cent.	Yards.	Per cent.
12-inch rifle.....	6,635	22.6	6,942	45.5
10-inch rifle.....	6,565	34.5	7,185	42.3
8-inch rifle.....	4,878	45.5	5,977	33.3
6-inch rifle.....	5,301	28.6	4,968	18.1
12-inch mortar.....	4,720	12.6	4,701	10.5

The progress in target practice is more satisfactory than the tabulated results indicate, as the work during 1915 was performed with less assistance from the regular troops than in the preceding year. The service practice during the joint coast-defense exercises of 1916 was held at longer ranges than heretofore, but reports of the results are not available at this time.

The following table shows the officers and enlisted men of the National Guard Coast Artillery in attendance at joint coast-defense exercises during the past summer. Fourteen per cent of the officers and 47 per cent of the enlisted men had not attended a prior encampment. The number reported as not having attended previous coast-defense exercises includes 16 newly organized companies.

State.	Fort.	Date.	Organizations.	Total strength. ¹		Present in camp. ¹	
				Off- cers.	En- listed men.	Off- cers.	En- listed men.
Maine.....	Williams.....	Sept. 14-23....	Band and 13 companies	51	843	46	756
New Hampshire....	Constitution....	Sept. 13-20....	4 companies.....	16	267	16	238
Rhode Island.....	Greble.....	July 16-23....	Band and 9 companies.	38	628	38	583
	.....do.....	July 23-30....	Band and 8 companies.	38	586	38	523
Connecticut.....	H. G. Wright....	June 22-July 1.	Band and 13 companies	53	844	49	778
New York.....	.....do.....	July 2-16....	Band and 12 companies	44	1,105	44	1,010
	.....do.....	July 16-30....	Band and 10 companies	33	930	33	858
Massachusetts.....	Strong.....	Aug. 13-29....	Band and headquar- ters.	15	44	10	43
	.....do.....	Aug. 13-22....	4 companies.....	12	281	10	271
	Andrews.....	Aug. 17-26....	.....do.....	12	290	9	249
	Warren.....	Aug. 20-29....	.....do.....	12	293	10	287
Maryland.....	Howard.....	Aug. 17-31....	1 company.....	3	65	3	50
District of Columbia	.....do.....	July 12-31....	.....do.....	3	56	3	54
Virginia.....	Monroe.....	Aug. 4-15....	.....do.....	3	()	3	61
North Carolina.....	Caswell.....	Aug. 7-19....	6 companies.....	22	414	21	332
South Carolina.....	Moultrie.....	Aug. 20-28....	5 companies.....	19	373	14	323
Georgia.....	Screven.....	May 20-28....	4 companies.....	16	224	16	184
California.....	Winfield Scott..	July 9-23....	Band and 10 companies	33	628	31	473
	Rosecrans.....	July 7-23....	2 companies.....	9	140	9	103
Oregon.....	Stevens.....	July 16-29....	Band and 8 companies.	32	606	31	451
Washington.....	Worden.....	Aug. 20-31....	9 companies.....	36	639	35	536

¹ The columns showing "Total strength" and "Present in camp" include such officers and noncommissioned staff officers as are properly attached to coast-defense commands of the sizes indicated in each State. Most of the officers and a considerable number of enlisted men shown as absent during camp had been mustered into the United States service and were on recruiting duty in the States during the period of coast-defense exercises.

A uniform system of instruction, prescribed by War Department orders, has been in effect since 1911. The courses of study originally prescribed for officers were revised and made somewhat more extensive by General Orders, No. 2, War Department, 1916, and new schedules of instruction have been published for enlisted specialists, rated men, and gunners. It is the purpose of the Militia Bureau to make the examinations for the enlisted men of the Coast Artillery as thorough as those applied in like cases in the Regular service.

There has been a general improvement in efficiency in the Coast Artillery of most of the States, but the progress has been too slow. The small and irregular attendance at armory drills, the limited time allowed for summer exercises in the fortifications, and the constantly changing personnel in both officers and men continue to be serious obstacles to development. With a view to stimulating officers to make a better effort to qualify in the courses prescribed for their grades, attendance at the annual coast-defense exercises has been

made conditional upon their passing certain examinations. In a similar manner companies were not allowed to fire at service target practice this year unless they had qualified according to certain standards of organization and efficiency. The effect of these restrictions has been very beneficial.

A considerable number of the older officers were separated from the active service during the past year. The average commissioned service of National Guard Coast Artillery officers reported at the last inspection is as follows:

	Years.		Years.
Colonels.....	21.3	Captains.....	7.3
Lieutenant colonels.....	19.5	First lieutenants.....	3.7
Majors.....	11.7	Second lieutenants.....	1.4

ENGINEERS.

The strength of the Engineer troops of Organized Militia, as shown by the armory inspections, January to March, 1916, was 70 officers and 1,165 enlisted men. Since that time two companies have been recognized, viz, one company at Honolulu, Hawaii, May 4, 1916 (strength, 4 officers and 65 enlisted men), and one company at Boulder, Colo., June 3, 1916 (strength, 3 officers and 54 enlisted men). The total strength at the end of the fiscal year, as shown by reports of Regular Army inspectors, was 77 officers and 1,284 enlisted men. This is a gain since last report of 8 officers and 16 enlisted men.

Since July 1, 1916, and due probably in a measure to the impetus given by the border situation, six companies have been organized and recognized up to September 12, 1916, viz, one company each at Norfolk, Va.; Wilmington, N. C.; Charlotte, N. C.; Port Arthur, Tex.; Dallas, Tex.; and Sacramento, Cal.; and one company, F, Fourth Pennsylvania Infantry, at Pottsville, Pa., was transferred to Engineers. The total number of companies has increased from 19 in 1915 to 29 in September, 1916.

The effectiveness of the paper strength was shown by the mobilization, where an average strength of those companies actually accepted in the United States service (in cases of those troops on the border, all but three companies, the strength is that actually present in camp July 31, 1916), was approximately 100. Ohio, Pennsylvania and Michigan had approximately the peace strength of 109 enlisted; New York, slightly less; Illinois, Iowa, and Company B Colorado, an average of about 80. The greatest difficulty was experienced in Company A, Engineers, of Colorado, composed almost exclusively of students from the Colorado School of Mines, which was not mustered in until August 5, 1916. This fact is a striking argument against maintaining as part of the first line (National Guard) organizations composed of students. Company B, Engineers, National Guard of Pennsylvania, did not lose a single man upon physical examination.

The act of June 3, 1916, changed the organization of the complement of Engineers for a division of the Regular Army from the battalion of four companies to a regiment of two battalions of three companies each. The change was effective on July 1, 1916, but to date of this report the National Guard Engineers had not effected the reorganization except in Ohio, where the four companies were constituted one battalion and one separate company.

The equipping of the troops in accordance with provisions of Circular 16, D. M. A., 1915, has been accomplished except in certain items not procurable on account of the cutting off of foreign supply and inability of domestic manufacturers to produce the articles on short notice.

An additional sergeant of Engineers was detailed as sergeant-instructor of the Engineer troops in the States of Iowa, Illinois, and Michigan on December 15, 1915.

The usual drills and schools for officers, noncommissioned officers, and selected privates were held during the year. The correspondence course for the organizations outside of New York, Pennsylvania, and Ohio was unsatisfactory in results, due to the fact that participation was made voluntary. In Illinois only a fair adherence to the prescribed schedule of instruction was maintained.

State camps were held as mentioned in the last annual report for the Engineer Company in Oklahoma at Chandler, Okla., August 12 to 26, 1915, and for the Iowa Engineer Company at Iowa City, Iowa, August 16 to 25, 1915, and a provisional company in New York, July 18 to August 1, 1915.

Joint camps, mentioned in last annual report, were held at Belvoir Tract, Va., July 6 to August 28, 1915, all Engineer organizations east of the Mississippi participating. Plans were perfected for holding camp at the same place this year but the mobilization prevented.

The armory situation shows no change except in Philadelphia, where indications are that Company B Engineers will find accommodations by the fall of 1916 in the new armory constructed for the use of the Cavalry and Engineers.

SIGNAL CORPS.

During the past year the following changes have taken place in the Signal Corps troops. The Oklahoma company was refused recognition on account of inefficiency and was mustered out of the State service by the governor; two new type B (wire) companies have been organized, one in Kentucky and one in Hawaii.

The companies at Boston, Mass., and the one at Pittsburgh, Pa., have been increased to battalions. Company A, Ohio National Guard, from which recognition was withdrawn last year, was reinspected March 22, 1916, and recognition again extended to this organization and the State of Ohio credited with a battalion of Signal Troops.

Following the plan laid down last year to transfer A type companies to types B and E, the following changes have been made during the year:

- California, from type A to type B.
- Colorado, from type A to type B.
- Connecticut, from type B to type E.
- Missouri, from type A to type E.
- Nebraska, from type A to type B.
- New Jersey, from type A to type B.
- Virginia, from type D to type E.

In order that the organization may be able to collect and transmit military information this branch of the service requires that its personnel in addition to being trained as soldiers shall have a large amount of technical education and training.

Familiarity with the technical equipment and special apparatus can only be acquired by long application on the part of those who are required to use them.

As a result of conditions found to exist at the time of the annual armory inspections the following companies could not at that time be considered by the War Department as efficient for Federal purposes. They were therefore placed on probation until the next annual armory inspection, at which time they will be specially inspected with a view to determining their fitness to participate further in Federal appropriations:

- Company A, Colorado.
- Company A, Nebraska.
- Field Company, Virginia.

The present organization of the various State Signal Troops is as follows:

4 FIELD BATTALIONS.

Massachusetts.	Ohio.
New York.	Pennsylvania.

17 FIELD COMPANIES.

	Type.		Type.
Alabama.....	E	Kentucky.....	B
California.....	B	Michigan.....	A
Colorado.....	B	Missouri ¹	E
Connecticut.....	E	Nebraska.....	B
District of Columbia.....	B	New Hampshire.....	B
Hawaii.....	B	New Jersey ²	B
Illinois.....	A	Virginia ³	E
Indiana.....	E	Washington.....	A
Kansas.....	B		

AVIATION.

Realizing the importance of military aviation in war and to provide at least a nucleus of instructed aviators in the National Guard, this bureau recommended that the sum of \$76,000 be appropriated to be made available for the purchase and maintenance of material and equipment necessary for the proper instruction in military aviation of such officers and enlisted men of the National Guard as may be authorized by the War Department to attend the United States Signal Corps Aviation School. The sum requested was appropriated by Congress August 29, 1916.

Applicants who successfully pass the required physical examination and who are detailed by the War Department for instruction, will receive the same pay and allowances, including those of travel to and from the school of instruction, as are received by officers and enlisted men of the Regular Army of the same grade who are detailed on like duty.

In the estimates asked for under the appropriation made by section 13 of the act of May 27, 1908 (now sec. 83, act of June 3, 1916), \$1,000,000 was included in the total amount asked for (\$4,576,000) in order to provide the equipment for eight aero companies.

In view of the call of June 18, 1916, all appropriations for the National Guard were materially reduced, as only those organizations not called into the service of the United States were to be provided

¹ Equipped as a type B company; change in equipment to be made as soon as practicable
² Equipped as a type A company; change in equipment to be made as soon as practicable.
³ Equipped as a type D company; change in equipment to be made as soon as practicable.

for. The appropriation of \$4,576,000 asked for was therefore reduced to \$2,000,000, of which \$400,000 is available for the purchase of equipment for issue to such aero units of the National Guard as may be recognized by the War Department.

During the past year two aero companies, the First and Second, have been organized in the State of New York. The First Company was mustered into the United States service July 13, 1916, under the call of the President of June 18, 1916. The report of the commanding officer of this organization, Capt. R. C. Bolling, based on opinions formed from experience since organization, giving special consideration to experience since mobilization, is as follows:

There is no difficulty in obtaining any desired number of men of education, character, and intelligence to take up military aviation. Men qualified by character, intelligence, and education to become officers and not merely aviators can be readily obtained. If men of this sort are desired, there is no need to take men of a different sort.

It is extremely difficult—and, in my opinion, will not generally prove possible—to obtain the right sort of mechanics as enlisted men in National Guard aviation units.

The expert mechanical work required in an aviation unit is very great in amount and most exacting in character. The utmost skill and care are required at all times and in every detail. This work must be done by mechanics regularly and constantly employed on the aeroplanes and motors. Mechanics who report at the aviation field only once or twice a week for a few hours according to the established rule of National Guard duty can not keep the aeroplanes in condition to be used, nor can such mechanics themselves be trained successfully. Furthermore, except in war times men do not enlist in the National Guard merely to work nights and Saturday afternoons and Sundays at their regular trade. For these reasons and from our experience I am convinced it will always be necessary to employ an adequate force of expert professional mechanics to maintain and repair the aeroplanes of any National Guard organizations.

It is very doubtful whether men will join National Guard aviation units unless they can be reasonably sure that sooner or later they will be given a chance to fly.

If they do join and find that they can not expect any chance to fly they will soon become so dissatisfied as to be a detriment to the organization. Nine months of experience with all sorts of applicants, several hundred in number, has convinced me of this. All these applicants, even the uneducated and unintelligent, expected sooner or later to get a chance to fly. It was the same with all classes. If any said they wished to come in even though they could not expect any chance to fly, a very slight cross-examination disclosed the fact that they really relied on getting a chance to fly, notwithstanding what they said.

Analysis of the situation will readily disclose the reasons for this attitude on the part of applicants for National Guard aviation units. They are:

(a) The work of those men in an aviation unit who do not fly has little military character. It does not offer the attraction of Cavalry, Artillery, or even Infantry drill and military exercises. It is largely mechanical work and fatigue.

(b) Most National Guard organizations are socially homogeneous, and no man willingly assumes a position of permanent inferiority to any others. While different men do somewhat different duties, all work together and their duties are similar. No men are assigned permanently to a lower class of work, but all who make good get their chances. In aviation units this is neither practicable nor desirable, because professional mechanics, chauffeurs, etc., do not make good material for aviators, who are expected also to have the education and intelligence of officers, and men of the education and intelligence expected of officers do not make good mechanics. In short, an aviation unit is a collection of specialists who ought to be kept continuously and permanently at their own classes of work. If all the men expect, or even hope sooner or later to fly, there is sure to be constant discontent.

(c) Men in civil life who are sufficiently interested in aviation to join a National Guard aviation unit are interested primarily in the flying and only secondarily in the mechanical and miscellaneous work attendant upon flying.

The officer of the aviation section, National Guard Signal Corps, Lieut. J. E. Carberry, in charge of the Signal Corps aviation station at Mineola, N. Y., reports as follows:

The First Aero Company has been in active service since our aeroplanes were constructed and

he Federal service July 13, 1916; it has been in active service for a period of nine months; it possesses a highly paid aviation service of which has been wholly

admirable, but as an aero company, in the military sense, it is nonexistent. The intention at the time of its creation was the training of a corps of officer aviators. In that it has succeeded, but it lacks, and under present conditions will continue to lack, the trained personnel that makes an aero company not only efficient, but even possible. No one will more candidly admit the truth of this statement than its own commanding officer.

The Second Aero Company was organized at Buffalo, N. Y., in the spring of the present year. It has had no opportunity to train its aviators, due to the fact (which must be emphasized most strongly) that it was raised in a city, which the largest aeroplane concern in this country, perhaps in the world, claims as its home, it does possess a certain number of trained aviation mechanics. Obviously, this advantage is most unusual, and, perhaps, would not obtain in any similar organization that might be mentioned, but, whatever his vocation, it is the desire of every man in the company that he be given an opportunity to demonstrate his qualifications as an aviator. The company was organized on this basis. Whether it was possible to organize it on any other is problematical. It may be argued that a new beginning on the basis of engaging a man for a certain clearly defined sphere of duty may be made, and at present an actual effort is being made in that direction.

The First Aero Company has established in New York City a recruiting office with the sole object of enlisting mechanics for the company. Although it has had the aid of the Aero Club of America, the Automobile Club of America, and the American Legion, and has sent out personal letters to many likely candidates, it so far has failed to secure even one enlistment.

Is it to be expected that other States will have greater success? Quite the reverse, considering the field of selection that is here open. It is not too much to predict that if in each State an aviation unit, or group of units, is raised, that the training of these units will be inadequate, except at a prohibitive cost, ununiform, due to the impossibility of Federal supervision, and inefficient, so far as preparation for war is concerned.

The efforts above described to establish and make efficient aero units of the National Guard were made under the most favorable circumstances.

The accounts of the two officers whose reports have been quoted—one of them an officer of the aviation section of the Regular Army and the other an officer of the National Guard, whose ability and professional attainments are well recognized in civil life—indicate plainly that no effort was spared by those who were charged with the task, and that the apparent failure was due to causes which could not be controlled.

These two officers practically agree in their conclusions, and these are based upon reasons which seem so convincing that the opinions expressed must be given great weight in deciding upon a policy to be followed in respect of instituting an aero service for the National Guard. Undoubtedly the spectacular part of the aviation service is that which attracts members of the National Guard. The drudgery connected with the aviation service, of which there is a great deal, and which is very essential to efficient maintenance, does not appeal to them. Relative values as between the work of flying and the other activities connected with the aviation service may be judged in some measure by the fact that of a personnel of 45 men in an aero company, only 6 are flyers. The rest never go up in the air at all, but are employed as mechanics, artificers, or otherwise, all being necessary, and each man being a high-class specialist in his own line.

It is conceded that the aero service is the most highly technical branch of an army. While a tolerable efficiency may be attained in the Infantry, Cavalry, Artillery, and other units of the National Guard, it is impossible to conceive of an efficient service in the maintenance and repair of the intricate mechanisms and elaborate appliances and matériel of aero units, through the intermittent or occasional service of voluntary workers.

While Congress has appropriated \$400,000 for the purchase of equipment to be issued to such aero units as the War Department

may recognize, the great cost of the equipment will make it necessary to impose conditions in respect of care and maintenance of matériel, which the State will find it difficult to meet. A final determination of the question must rest upon actual trial; but, so far, reason and experience both indicate an incompatibility between the aviation service of the Army and the National Guard service, which is beyond reconciliation, and which is entirely inconsistent with the idea that efficient National Guard aero units may be organized and maintained in time of peace.

It is still desirable to take advantage of the interest and enthusiasm which individual members of the National Guard have shown in military aviation, and this interest may well be utilized through provision for the attendance at the aviation schools of as many qualified students as may apply to attend.

In those States which are unable to maintain aero units, the graduated students of the aviation schools may find a useful activity by becoming incorporated in the Signal Corps Officers' Reserve Corps.

The pay and expenses incident to instruction at the schools, and the expansion of the aviation schools of the Army to meet an increase in the number of students, should be amply provided for, and, when this has been done, it is probably all that Congress should be asked to do toward the promotion of military aviation in the National Guard.

SANITARY TROOPS.

Since the date of last report the following new organizations have been completed up to June 30, 1916: Four ambulance companies, 3 field hospitals, and 14 detachments, making a total of 22 ambulance companies, 31 field hospitals, and 174 detachments. (See Table 13). Since June 30, 1916, there have been completed 4 ambulance companies and 7 field hospitals, making a total of 8 ambulance companies and 10 field hospitals organized since last report. The following table shows the existing sanitary units and the number required for the 12 National Guard divisions:

Division.	States comprising divisional districts.	Organized.	Shortage.
Fifth.....	Maine, none, New Hampshire (1 F. H.), Vermont, none, Massachusetts (2 F. H. and 2 A. C.), Connecticut (1 F. H. and 1 A. C.), Rhode Island (1 A. C.).	4 F. H. 4 A. C.	None.
Sixth.....	New York (4 F. H. and 4 A. C.).....	4 F. H. 4 A. C.	None.
Seventh....	Pennsylvania (2 F. H. and 2 A. C.).....	2 F. H. 2 A. C.	2 F. H. 2 A. C.
Eighth.....	New Jersey (1 F. H. and 1 A. C.), Delaware, none, District of Columbia (1 F. H.), Maryland (1 F. H. and 1 A. C.), Virginia (1 F. H.), West Virginia, none.	4 F. H. 2 A. C.	2 A. C.
Ninth.....	North Carolina (1 F. H. and 1 A. C.), South Carolina (1 F. H.), Georgia (1 F. H.), Florida (1 F. H.).	4 F. H. 1 A. C.	3 A. C.
Tenth.....	Kentucky (1 F. H. and 1 A. C.), Tennessee (1 F. H. and 1 A. C.), Alabama (1 F. H. and 1 A. C.), Mississippi, none.	3 F. H. 3 A. C.	1 F. H. 1 A. C.
Eleventh...	Ohio (3 F. H. and 2 A. C.), Michigan (1 F. H. and 2 A. C.).....	4 F. H. 4 A. C.	None.
Twelfth....	Illinois (2 F. H.), Indiana (1 F. H. and 2 A. C.).....	3 F. H. 2 A. C.	1 F. H. 2 A. C.
Thirteenth.	Iowa (1 F. H. and 1 A. C.), Wisconsin (1 F. H.), Minnesota, none, North Dakota, none, South Dakota, none.	2 F. H. 1 A. C.	2 F. H. 3 A. C.
Fourteenth.	Colorado (1 F. H.), Nebraska (1 F. H.), Missouri (1 F. H. and 1 A. C.), Kansas, none, Wyoming, none.	3 F. H. 1 A. C.	1 F. H. 3 A. C.
Fifteenth...	Louisiana (1 F. H.), Oklahoma (1 F. H. and 1 A. C.), Texas (1 F. H.), Arizona, none, New Mexico, none, Arkansas, none.	3 F. H. 1 A. C.	1 F. H. 3 A. C.
Sixteenth...	California (1 F. H. and 1 A. C.), Utah (1 F. H.), Washington, none, Oregon, none, Idaho, none, Nevada, none.	2 F. H. 1 A. C.	2 F. H. 3 A. C.
	Total.....	33 F. H. 26 A. C.	10 F. H. 23 A. C.
	Total units.....	64	33

While this increase in sanitary units is encouraging, it was largely due to mobilization of the National Guard, with prospects of active service. Newly organized sanitary units, under most favorable conditions, could not be made ready for efficient service in campaign within a less period than six months of intensive training after receiving their equipment and transportation. The formation of these organizations should not await the necessity created by a threatened conflict. They should be organized, equipped, and trained in time of peace. If this mobilization results in impressing upon the medical profession and the responsible State authorities the necessity of adequate sanitary units, properly trained and equipped in time of peace it will have done much toward the cause of preparedness.

The strength of the sanitary troops on June 30 was 884 officers and 4,436 enlisted men, a total gain of 884 during the year. (See Table 13.) The strength has been greatly augmented since mobilization by new units and detachments, also by increasing the personnel of organizations to war strength.

At the armory inspection in 1915, out of a total of 884 commissioned officers, 125 were not inspected. Of 4,436 enlisted men, 539 were absent from the inspection. (See Table 13.) While this is an improvement over last year, yet it is a large number concerning which there is no accurate information as to suitability and qualifications for military service.

In the majority of the States the condition of the sanitary troops in respect to organization, training, and equipment shows improvement over last year, although it is far from having reached the desired standard if immediate use of these organizations for campaign is considered. The degree of efficiency differs widely. In many States but a short period of preparation would be needed to make the sanitary troops ready for field service. In others, however, much time and labor would be required.

INSTRUCTION AND TRAINING.

In addition to the number of inspector-instructors reported last year, one other was authorized and assigned to the States comprising the Fifth Division, making a total of six medical officers of the Regular Army on this duty. All have shown commendable zeal in their efforts to increase interest among the sanitary troops and to improve their efficiency, but the number is entirely inadequate to accomplish the results desired. However, the results have been gratifying, and the numerous requests from States for additional officers, warrants the detailing of a sufficient number of medical officers of the Regular Army to provide for frequent visits of instruction to all sanitary detachments and units. The number of sergeant-instructors for sanitary troops was increased during the year by three at the request of this bureau, making a total of 15 on this important duty. The result of their work warrants the detailing of a sergeant of the medical department for each National Guard sanitary unit and sufficient additional ones to provide adequate instruction to the sanitary detachments. The value accruing to the Federal Government of detailing officers and noncommissioned officers with the National Guard from the viewpoint of increasing their efficiency, can not be overestimated. The money spent in

this way will produce results that can not be secured by any other method.

CORRESPONDENCE COURSE.

In addition to the personal instruction, a correspondence course for medical officers of the National Guard was conducted by the inspector-instructors. Upon request, the War Department detailed sufficient medical officers from near-by posts, who, in addition to their post duties, conducted the correspondence course in those States for which no sanitary inspector-instructors were provided. While these officers performed the duty assigned to them in a satisfactory manner and the medical officers of the National Guard were able to get some theoretical instruction, yet the numerous changes of station of these officers seriously interfered with the work and made it impossible to secure the good results obtained by the inspector-instructors. The policy adopted last year of having all the questions prepared and sent out from this bureau has proved much more satisfactory than the previous method of having each inspector-instructor prepare the questions for his district. It is deemed advisable to continue this method.

More than 60 per cent of the medical officers successfully completed the prescribed courses. (See Table 12.) No reports were received from some States, partly due to the mobilization order and partly to the necessity of sending the medical officers conducting the course to the border for duty. The best showing was in States having medical officers detailed as inspector-instructors. Maj. Carl Philips, Medical Corps, National Guard of Kansas, was awarded a certificate of proficiency under the provisions of General Orders, No. 43, War Department, 1914. Having had more than 10 years' service in the Organized Militia, he was, upon request, permitted to take the final examination in the course, which he passed successfully.

FIELD INSTRUCTION.

It was planned to have a 10-day camp of instruction for medical officers and noncommissioned officers of the Medical Department at five conveniently located camps in the United States in June, to be followed by a 10-day joint camp for the sanitary units of the several States. A program had been arranged for a thorough practical course of instruction. All States except one had signified their intention of participating to the extent of the availability of funds for this purpose. Owing to the nonavailability of regular medical officers and sanitary units for instruction purposes, and the uncertainty of funds being made available by Congress, the proposed camps to be held at Tobyhanna, Pa., Anniston, Ala., and Fort Riley, Kans., had to be abandoned. The proposed camps scheduled for Sparta, Wis., and Monterey, Cal., were given up on account of the mobilization of the National Guard. These camps of instruction are of inestimable value for the training of sanitary troops, and unless the funds for this purpose are assured by March 1 of each year they can not be satisfactorily planned and consummated. In addition, adequate sanitary personnel and units of the regular Medical Corps must be available for instruction purposes, otherwise the funds for this purpose can not be economically and beneficially spent.

ARMORIES.

With few exceptions, adequate armory facilities are afforded for the proper training and instruction of the sanitary troops during the indoor period. However, this can not be said in so far as it pertains to the proper storage of Federal property issued to the States for use of the sanitary troops. There appears to be a reluctance on the part of some States to provide these facilities. Many sanitary organizations are not provided with their proportional share of armory facilities nor with funds allotted by States for use of organizations. In some cases expensive locker facilities are provided for line troops and none for the sanitary troops occupying the same armory, and in several instances ample funds to the extent of providing luxuries are furnished line troops when the sanitary troops are not so provided. In nearly all States, caretakers and other persons are employed by the States to take care of the Federal property issued to line troops, when no such provision is provided for the sanitary troops. Such discrimination causes dissatisfaction, tends to discredit the necessity of sanitary troops, and does not promote their efficiency.

MATÉRIEL.

The sanitary organizations are, with few exceptions, equipped for the field. Much of the equipment is of obsolete model. Some of it is unserviceable by fair wear and tear, and there is some which is not in a serviceable condition due to the failure of the States to provide proper storage facilities to protect it from the elements. Unless States will take steps to provide adequate and proper storage facilities for the valuable medical property issued to it, the withdrawal of this property and Federal recognition is deemed advisable.

A large shortage of expendable articles is reported from several States, which in most cases have been expended during camp service. If the responsible medical officer would, upon return from camp, submit requisition to cover all articles expended in camp and necessary to complete the equipment of their organizations, this would not occur. In several instances the responsibility lies with the State supply officers because of their failure to forward duly rendered requisitions. In order that sanitary organizations may be always prepared for campaign, it is advisable that they be equipped with the latest pattern of matériel, which should be properly marked and stored for use when called into the Federal service. The obsolete equipment could be used for camp service in time of peace.

PHYSICAL EXAMINATION AND TRAINING.

It is a matter of record that all States except two have adopted the physical standards prescribed for the Regular Army, and the majority of the States claim a rigid enforcement; but reports of inspectors indicate that great laxity has existed in the majority of the States in this respect. This has been confirmed by the recent mobilization. As the requirements of the regular service make it necessary that the physical condition of each and every man enlisted or reenlisted be passed upon by a medical officer, it would appear that the Medical Corps of the National Guard was responsible for the personnel found

physically disqualified. This is no doubt true to a certain extent. It is not deemed advisable to expend money on the training and instruction of men who when needed for active service are found to be physically disqualified. Every man in the National Guard should be physically qualified for any duty devolving upon him. This can best be accomplished by instituting a thorough physical reexamination of each person as soon as practicable after enlistment and reenlistment in the National Guard by a medical officer of the regular service; also this should be done annually for the commissioned personnel. In this way the physically disqualified could be weeded out. Those having defects that are not disqualifying could have them waived. This would result in not more than 1 per cent of the personnel being found disqualified when called into the Federal service.

There are a large number of persons rejected for physical defects, such as poor physique, deficient chest expansion, and similar defects, who do not conform to the prescribed standard physical requirements, but who under proper physical training would in a short time meet these requirements and be able to endure the physical strain of campaign. If more time and attention were paid to the physical development and training of a soldier, a large number of the above type of men could in time of peace be enlisted in the National Guard and Army without decreasing its efficiency. Only a casual inspection is needed to impress upon anyone with military training that the National Guard personnel as a body is lacking in physical training; even those long in the service lack the physique which should result from proper military training.

TYPHOID PROPHYLAXIS.

There is very little change in the status of typhoid prophylaxis as reported last year. Some States have given considerable attention to the matter, while others have not. The annual inspection reports show that 2,481 officers and 24,866 enlisted men had received complete antityphoid prophylaxis out of a reported strength of 8,589 officers and 123,605 enlisted men, making a total of 27,347 protected against typhoid fever out of a total strength of 132,294. As compared with the report of last year showing 22,551 receiving complete antityphoid prophylaxis out of a total strength of 129,398, making 20 per cent during the past year, as against 17.4 per cent during the year previous, this increase is encouraging. However, too large a percentage are unprotected. It is believed the recent mobilization, which brought the National Guard under regulations prescribed for the Regular Army, requiring vaccination of all persons in the Federal service, will do much toward further popularizing these preventive measures. It is believed that the time has arrived to make them compulsory in the National Guard, thereby making it ready for a hasty call into the Federal service.

NONCOMMISSIONED OFFICERS.

The importance of intelligent, well-trained, competent noncommissioned officers for the medical department can not be overestimated. Without them the sanitary service of any organization will break down in campaign, and important records necessary to safeguard the Government and the interest of the soldier can not be secured. If to this

is added a commissioned personnel with little or no knowledge of paper work required in the Federal service, we have a combination which will fall far short of efficiency.

With the exception of a few States, little or no efforts have been made to secure capable men for noncommissioned officers for the medical department, and little effort on the part of the commissioned personnel of the medical department to establish schools of instruction for noncommissioned officers to make them proficient in their duties. Examinations for appointments to the grades of sergeant first class, sergeant, and corporal have been of a perfunctory nature, and very often the noncommissioned officer is no more familiar with his duties than the private. Due to the lack of sufficient medical officers and noncommissioned officers of the Regular service detailed with the National Guard for instruction purposes this serious defect could not be corrected, and it is believed that one of the most serious defects found existing in the medical department of the National Guard called into the Federal service will be as above indicated. If it is of such import as to impress upon those concerned the necessity of devoting more attention in this direction, the mobilization will have accomplished something. Under the provisions of the act of June 3, 1916, the War Department has been given broader and greater power, as well as more adequate facilities, to correct this defect, and close supervision will be exercised along this line in the future.

ACT OF JUNE 3, 1916.

The act of June 3, 1916, contains much beneficial legislation which, when enforced, will greatly improve the efficiency of the medical department of the National Guard. It provides for uniform courses of armory and field instruction along lines prescribed for the Regular Army. It provides for an increased number of inspector and sergeant instructors. It provides for examination of medical officers and noncommissioned officers under Federal supervision. It will mean greater devotion to duty and acquisition of military knowledge on the part of the personnel. In addition, the act of August 29, 1916, provides for horses for the sanitary troops.

The progress made by the sanitary troops since the last report has been most satisfactory, and indicates a commendable spirit of the proper appreciation of the necessity for sanitary troops on the part of those concerned. The European war has been an important factor in demonstrating to the medical profession and others concerned that an adequate, well-organized, properly equipped, and trained sanitary personnel is a national asset in time of war; that sanitary organizations to be useful and fulfill their military functions must be organized, equipped, and trained in time of peace. The public not only expects, but demands, that the health and lives of its soldiers be properly safeguarded. Military efficiency demands that all preventable diseases be eliminated from the Army; that at least 65 to 85 per cent of its wounded be returned to the firing line.

MACHINE-GUN UNITS.

Under the provisions of the act of June 3, 1916, the status of the machine-gun units has been changed from provisional to permanent organizations.

During the year the number of National Guard machine-gun units has been increased from 35 to 55. The armament of these organizations is as follows:

Equipped with 4 Benet-Mercier.....	42
Equipped with 4 Maxim.....	10
Equipped with 4 Lewis.....	3
Total.....	55

The issue of other types of guns was made necessary by the shortage of guns and equipment of the standard type.

The allowance of ammunition for these units when they participate in firing exercises at joint camps or camps of instruction which are under the supervision and direction of an officer of the Regular Army has been increased to an amount not less than one-half the annual Regular Army allowance of ammunition for each machine gun.

On January 8, 1916, the War Department issued directions to department commanders to establish joint camps of instruction for machine-gun companies of the Organized Militia within their respective departments.

Machine-gun companies of the Organized Militia were to be ordered to these camps upon the recommendation of the adjutants general of the States and of the District of Columbia for a period of 15 days. A program of instruction was prepared based on an available instruction period of 96 hours.

The delays incident to the passage of the Army appropriation bill, and later the calling into the United States service of the National Guard, necessitated the abandonment of this proposed plan of instruction.

Actual firing practice at summer camps of instruction, in conjunction with troops of the Regular Army when practicable, will be made the chief feature in the scheme of instruction of machine-gun units of the National Guard, and proficiency in such practice will be made a condition of continued recognition. As packing and the management of pack animals is an important part of machine-gun service, each machine-gun unit should have a small nucleus of pack mules, not exceeding four, for instruction purposes when stabling facilities can be provided at or near the armories.

SMALL-ARMS TARGET PRACTICE AND COMPETITIONS.

Complete data of the results of target practice for the target (calendar) year 1915 are set forth in Table 14 of this report. Owing to the fact that this report goes to press before the close of the target year 1916, it is possible to submit tables showing the practice conducted during the target year 1915 only.

Attention has been called in previous annual reports to lack of progress in rifle firing. Although results of firing for the year 1915 show a slight improvement over the preceding year, the percentage of men qualifying with the rifle is still very unsatisfactory and is far from justifying the amount of the expenditures made for the promotion of rifle practice.

The following table shows the percentage of the Organized Militia which has qualified in rifle practice during the past nine years:

Statement showing rifle practice of successive years.

Year.	Strength of organiza- tions armed with rifle.	Total number qualifying as second- class men or better.	Percentage qualifying.
1907.....	97,642	46,523	47.6
1908.....	101,929	53,379	52.4
1909.....	108,851	56,896	52.3
1910.....	109,658	54,202	49.4
1911.....	111,829	48,150	43.1
1912.....	110,737	49,159	44.4
1913.....	111,140	42,599	38.1
1914.....	90,835	31,631	34.8
1915.....	108,561	41,701	38.4

The cost of target practice of the Organized Militia for the calendar year 1915 includes the following items, viz:

Acquiring and developing rifle ranges.....	\$261. 98
Shooting galleries.....	2, 155. 51
Civilian markers and scorers.....	45, 183. 69
Entrance fees.....	2, 635. 50
Prizes.....	5, 603. 22
Purchase rifle ranges.....	9, 684. 20
Caretakers, rifle ranges.....	29, 179. 36
Rent, rifle ranges.....	23, 359. 35
Construction and improvements (labor and material).....	93, 524. 34
Ammunition.....	98, 969. 62
Miscellaneous.....	2, 424. 64
Total.....	312, 981. 41

From a comparison of this total with the number of men qualifying as second-class men or better during the calendar year 1915 it results that the cost to the United States, exclusive of the items of pay, transportation, and subsistence at rifle camps of instruction, is \$7.50 per man. The items of pay, transportation, and subsistence at rifle camps of instruction are not separable from expenditures for other camps of instruction and can not, therefore, be included in the computation of the cost of rifle practice. If ascertainable, they would greatly increase the computed cost of qualification.

These figures make plain the necessity for an earnest endeavor to increase the returns on expenditures made for the promotion of rifle practice.

As stated in the last annual report, the degree of training expressed by the qualification of second-class men is a very low minimum, and any lower degree of skill has such a small value that it may be regarded as negligible. Indeed, failure to attain this qualification is evidence of such a hurried firing of the course or of firing without proper instruction that the actual result is more probably the engendering of individual faults which may represent a positive loss rather than an increase of skill. In this connection it may be remarked that the practice which exists in one State of firing the entire course of rifle practice in one day can not fail to be detrimental to any real progress in rifle practice.

The failure of the adjutants general of four States to comply with the provisions of section 12 of the militia law requiring them "to

make returns to the Secretary of War, at such times and in such form as he shall from time to time prescribe, of the strength of the Organized Militia, and also make such reports as may from time to time be required by the Secretary of War" made it impossible to include the troops of those States in the tables showing the results of small-arms practice.

ARMORY INSTRUCTION.

The reports show a considerable improvement over those for the calendar year 1914 in respect to gallery practice, the number of men qualifying in gallery practice being nearly twice as great.

The remarks made in the last annual report as to the necessity of pursuing a progressive scheme of indoor instruction involving sighting, position, and aiming drills preliminary to gallery practice are here again emphasized.

RIFLE CAMPS OF INSTRUCTION.

These camps are sometimes held exclusively for the purpose of instruction in rifle practice and sometimes in conjunction with other camps for field instruction and maneuvers. The former are most beneficial in results. As a rule it may be said that rifle camps of instruction in conjunction with camps for field instruction and maneuvers are to be discouraged, as the two forms of instruction mutually interfere with each other. However, in States where but few ranges are available and the troops are distributed in many different stations, it has been necessary to take advantage of the occasions when the troops are assembled at the annual encampment for firing the prescribed course. The remedy for this condition lies in the provision of ranges for each company station.

In many States the limited time allotted to range practice (in one State but one day was allowed for the firing of all its troops through the entire Organized Militia course) made adequate instruction out of the question. A hurried firing of a large amount of ammunition in so short a period is worse than useless, for it is sure to engender in the untrained shot vices which, once formed, are very difficult to eradicate and which therefore decrease his value as a potential marksman below that of the man who has never fired a shot.

It may be laid down as a general rule that under efficient instruction the average recruit can not properly fire more than 40 rounds a day, and that therefore a minimum of three days should be allowed for the firing of the 97 rounds included in the Organized Militia course. Under a proper system of instruction, which will include a repetition of preliminary instruction and gallery practice for men found not properly prepared to fire service ammunition, the entire period of three days will be fully occupied in firing the prescribed number of rounds.

RANGE PRACTICE OF INDIVIDUALS.

Much of the outdoor instruction in small-arms firing consists in the range practice of individuals attending the nearest available range. Cost, time, and other factors considered, this method of conducting rifle practice is the most efficient means of securing results. It has therefore been the policy of the Militia Bureau to encourage the acquisition or lease of target ranges with a view to the ultimate pro-

vision of a target range for each Infantry, Cavalry, and Engineer station.

PISTOL PRACTICE.

In 24 States no pistol practice is reported to have been held. Paragraph 356f, Small-Arms Firing Manual, 1913, requires that "all officers and enlisted men armed with the pistol, except field officers, for whom the course is authorized but not prescribed," shall fire the prescribed course.

COMPETITIONS.

In the opinion of this bureau the true purposes which the national match should serve as a part of the scheme of national defense are as follows:

1. A school of musketry by means of which competitors could become qualified to act as instructors in target practice and thus disseminate the knowledge of that subject throughout the National Guard.

2. As a stimulus to members of National Guard organizations to perfect themselves in marksmanship in order that they may be able to win a place on the team.

The concrete evidence which should be demanded of the national matches that they are fulfilling these purposes is to be sought in the number of men qualified with the rifle, and as yet this evidence is lacking.

In order that the national match shall serve effectively the purpose of a school of musketry, it is first necessary that adequate range facilities be provided at the home stations of their organizations. For there is manifestly no purpose in training a corps of skilled instructors unless the ranges on which instruction can be given are supplied. Nevertheless, many States in which range facilities are almost totally lacking annually send teams to the place of the national match at considerable expense.

As a further condition to sending a team to the national match, a prescribed percentage—not less than 60 per cent—of the enlisted strength of the National Guard of a State shall have fired the standard course of target practice. Unless this principle is followed, the matches are not serving the purpose of stimulating the spirit of competition in the organizations, and furthermore they are absorbing funds which had better be devoted to the practice of organizations. A team was sent to the national match held during the calendar year 1915 by one State in which the total number of men firing the rifle during the target (calendar) year was 61, by another State in which the same total was 179, and in another 189. Numerous other cases might be cited in which conditions were nearly as unsatisfactory.

In general, the failure of the national matches to serve their legitimate function is due to the fact that they have been considered as an institution existing for its own sake, and uncoordinated with the general scheme of the target practice of the National Guard. Until the national matches are brought into relation with the general system of target practice, they will serve no purpose commensurate with the expenditure involved.

A statement of the organizations winning the national trophy for excellency in target practice is contained in Table 15 of this report.

TARGET RANGES.

The policy of the Division of Militia Affairs has been to encourage the acquisition or lease in each State of—

(a) One well-equipped range of large target capacity at the points selected for the mobilization for war service of troops of the State. A range of this character will be necessary for the training of the large number of uninstructed men who will be incorporated in the ranks of the National Guard when mobilized for Federal service.

(b) A range of more limited extent and target capacity at the home station of each organization of Infantry, Cavalry, and Engineers, the size and equipment of these ranges depending upon the number of organizations which they serve. Ranges of this character are necessary in order that peace training in target practice may be conducted without the excessive expense incurred in transporting the troops to the site of ranges of the first class and in order that progressive instruction may be given throughout the target season without the haste which is necessary when troops are assembled for a few days' instruction at the larger ranges.

Satisfactory progress has been made in the provision of ranges of the first class. All but a few States are now supplied with ranges of this character.

In regard to ranges of the second class, conditions are less satisfactory, but steady progress toward the desired end is being made in many States. Some States, however, rely entirely on practice conducted when the troops are assembled at camps of instruction. As elsewhere remarked in this report, this procedure does not give satisfactory results.

The Army appropriation act for the fiscal year 1917 makes provision for carrying into effect the provisions of section 113, act of June 3, 1916, by appropriating the sum of \$300,000 and authorizing the appointment of a director of civilian marksmanship. Section 113 of the act of June 3, 1916, contemplates the development under the direction of the Secretary of War of "such a comprehensive plan as will ultimately result in providing adequate facilities for rifle practice in all sections of the country." Under the provisions of this section, this plan should include all target ranges hereafter constructed from funds appropriated by Congress, and comprise rifle ranges provided for the use of the National Guard, as well as those constructed for the encouragement of civilian rifle practice. The section further provides that "all ranges so established and all ranges which may have already been constructed, in whole or in part, with funds provided by Congress shall be open for use by those in any branch of the military or naval service of the United States and by all able-bodied males capable of bearing arms."

These provisions contemplate a system of target ranges that will be available for all classes who are to receive training in rifle practice. This implies a high degree of coordination in the plans under which the ranges are located and the expenditure of the different appropriations are made. The two principal appropriations under which expenditures for the construction of rifle ranges will be made are "Rifle ranges and target practice National Guard" and "Encouragement of rifle practice" under sections 67 and 113, respectively, act of June 3, 1916.

It is believed that the proper coordination of these expenditures can only be insured by placing the expenditure of both appropriations under the control of one agency.

ARMORIES.

The armories in the various States differ widely in their cost, in their adaptability to instruction, and in the protection afforded against the elements, against fire, and against theft. Attention has been called where conditions are not satisfactory, and it is hoped that some States which have not been liberal in their appropriations will be more so in the future, as the enlisted man who subscribes to the National Guard oath is entitled not only to the services of properly trained officers, but to a reasonable degree of consideration on the part of the State, manifested by affording him a commodious and comfortable armory. Facilities for proper heating and for bathing—principally shower—will add largely to contentment.

FEDERAL FUNDS.

DISBURSEMENTS.

During the year the following amounts were disbursed from Federal appropriations for the support of the Organized Militia and the National Guard:

Under section 1661, Revised Statutes.....	\$1,518,091.54
Under section 1661, Revised Statutes, for purchases.....	595,128.13
Under act of May 27, 1908.....	1,991,448.56
Under the appropriation "Care of horses and matériel, Field Artillery, Organized Militia, 1916".....	108,853.15
Under special appropriation for procurement of Field Artillery equipment.....	1,875,870.72
Under special appropriation for equipment of Coast Artillery armories.....	29,828.92
Under the appropriation "Encampment and maneuvers, Organized Militia," for joint encampments, mobile army.....	113,424.46
Under the appropriation "Encampment and maneuvers, Organized Militia," for joint coast-defense exercises.....	148,762.04
Under appropriation for mileage for the Regular Army.....	35,718.16
For transportation of supplies.....	50,396.40
Total.....	6,467,522.08

NOTE.—The above amount does not include the expenses of noncommissioned officers on duty with the Organized Militia, nor the expenses connected with the sending of officers and enlisted men of the Organized Militia to the service schools.

Of this amount, \$1,518,091.54 was disbursed under section 1661, Revised Statutes, and was used in payment of subsistence, transportation, and other expenses of the Organized Militia engaged in field instruction under regulations established by the Secretary of War. A certain percentage of this amount was used for the promotion of rifle practice, purchase of stores, etc. All disbursements from this allotment were made by the United States disbursing officers of the several States, the Territory of Hawaii, and the District of Columbia.

Under the same appropriation the sum of \$595,128.13 was spent for supplies, etc., but this amount was not disbursed by the United States disbursing officers of the several States, the Territory of Hawaii, and the District of Columbia. Under section 13 of the militia law (act of May 27, 1908), the sum of \$1,991,448.56 was

applied to supplies and equipment issued to the Organized Militia on requisitions submitted by the governors of the several States, the Territory of Hawaii, and the commanding general of the District of Columbia Militia, and approved by the Secretary of War.

Under the appropriation "Encampment and maneuvers," there was spent \$113,424.46 for the payment of transportation, pay, and subsistence for the members of the Organized Militia participating in joint encampments with the Regular Army. Under the same appropriation there was allotted for joint Coast Artillery defense exercises the sum of \$148,762.04. These funds were disbursed by officers of the Quartermaster Corps of the Army.

Under the appropriation "Care of horses, matériel, Field Artillery, Organized Militia, 1916," the sum of \$108,853.15 was expended. Of this amount, \$61,791.97 was disbursed by the United States disbursing officers of the several States and the District of Columbia for the payment of mechanics and helpers authorized in the various batteries, and \$47,061.18 for the procurement of forage and authorized veterinarian supplies for the animals used for Field Artillery purposes as authorized under the act of March 4, 1915.

During the past year accounts received from disbursing officers have, as a general rule, shown, as was reported for the fiscal year 1915, careful preparation. The suspensions by the Auditor for the War Department were in most cases for errors and technicalities. The accounts received were in the majority of cases rendered promptly after the end of the months for which due, and in very few cases can it be stated that the accounts were submitted after the period designated for their transmission had elapsed.

Regulations governing the appointment of property and disbursing officers of the United States required in each State under the provisions of the act of June 3, 1916, and the apportionment and disbursement of Federal funds appropriated for the National Guard under the provisions of this act, were published under date of July 14, 1916, and were in the hands of the authorities of the several States, the Territory of Hawaii, and the District of Columbia when funds appropriated under the provisions of the Army appropriation act for the fiscal year 1917 became available.

REGULATIONS GOVERNING FIELD OR CAMP SERVICE FOR INSTRUCTION.

The provisions of Circular 17, Division of Militia Affairs, 1914, publishing the regulations governing camps of instruction for 1915 were found to require revision in certain minor particulars. These regulations were revised and republished in Circular 15, Division of Militia Affairs, December 8, 1915, in time to be used by the Organized Militia during the summer encampments of 1916, but in view of the call of June 18, 1916, whereby practically all of the Organized Militia were called into the service of the United States, few organizations had prior to that date undergone any field or camp service for instruction during the summer of 1916.

The regulations published in Circular 15, Division of Militia Affairs, 1915, were continued in effect after the passage of the act of June 3, 1916, until such regulations carrying into effect the provisions of the new law could be formulated and submitted to the Secretary of War for his approval.

Of the two principal changes in the prior regulations on this subject, found necessary as a result of previous experience, the first was the requirement that the 60 days' continuous service required of the enlisted men immediately preceding the encampments should be in the arm of the service of the Organized Militia in which they were paid at the encampment, including not less than 14 periods of practical progressive military instruction of at least one and one-half hours each in that arm, or like service and instruction in the Regular Army, Navy, or Marine Corps of the United States, or one term of a year's service at a school where military instruction in that arm was given under the supervision of an officer of the Regular Army or Organized Militia. Previously the requirements had been such as to permit of pay to enlisted men who had had 60 days' service and 14 periods of practical progressive military instruction in the Organized Militia irrespective of the arm of the service in which they had served during the period. The other change was to require the same conditions as to service and instruction for rifle camps of instruction as for joint State camps of instruction, practice marches, and joint and State maneuvers.

FEDERAL PROPERTY.

ACCOUNTABILITY.

Regulations governing the issue, survey, accountability, and care of United States property issued to the several States for the use of the National Guard thereof, rendered necessary in view of the provisions of the act of June 3, 1916, were published under date of July 12, 1916, for the information and guidance of those concerned.

The appointment of the property and disbursing officer required under the act of June 3, 1916, and the subsequent transfer of the accountability for the United States property from the governors of the several States and the commanding general of the National Guard of the District of Columbia to these officers has been delayed on account of the mobilization of the National Guard, but it is expected that this transfer will have been completed and the property and disbursing officers in the several States entered upon their new duties by the end of September, 1916. At the date of the submission of this report 41 States have taken the necessary steps toward the appointment of these officers, and their bonds have either been approved or are in course of accomplishment.

ISSUES.

The value of Government property issued to the Organized Militia during the fiscal year 1916 is shown by appropriations in the following table:

Under the act of May 27, 1908.....	\$1, 991, 448. 56
Under section 1661, Revised Statutes.....	595, 128. 13
Total concurrent appropriation.....	2, 586, 576. 69
Under the special appropriation for the procurement of Field Artillery matériel.....	1, 875, 870. 72
Equipment of Coast Artillery armories.....	29, 828. 92
Care of horses and matériel, Field Artillery.....	108, 853. 15
Grand total.....	4, 601, 129. 48

The policy inaugurated by this office in 1914 of prescribing, prior to the annual inspections, the various articles that must be on hand for inspection in serviceable condition in order to require the equipment of the Organized Militia for field service in accordance with law has been carried out with very successful results. The only difficulty experienced has been that in the majority of cases the States preferred to wait until informed by the War Department of the results of the inspection before submitting requisitions to cover the deficiencies, the result being that, instead of being properly equipped at the time of the inspection, the articles required were not requisitioned for and received until some months later. This was forcibly brought to light as the result of the call of June 18, 1916, many requisitions being unfilled at that time which had to be canceled in order to prevent duplication of issues after muster in of the organizations. A statement (Table 17) is attached showing the condition of the several States in this respect, and the quantities of the several articles that were short of requirements on June 18, 1916.

Circular 10, Division of Militia Affairs, 1915, giving the requirements for the Federal inspections of 1916, was published May 27, 1915, in ample time for the States to obtain the equipment necessary before the inspections began on January 1, 1916, but as will be seen from the statement herewith (Table 17) but five States were equipped as required for the minimum authorized strength.

Circular 10, referred to in the preceding paragraph, stated that its publication was made on May 27, 1915, in order that those concerned may have timely notice of the War Department's intentions in the premises, and may have opportunity to obtain the equipment prescribed before the next inspection under section 14 of the militia law. The inspections referred to began January 1, 1916, and ended March 31, 1916.

The requirements set forth in this circular were such as to have the States provide for the necessary uniform clothing (except shoes, underwear, and cotton clothing) and individual equipment for the prescribed minimum strength of all organizations recognized by the War Department on January 1, 1916, and such organizational equipment as was necessary for active field service.

SHORTAGES.

A very energetic effort has been made during the year by a few States to clear up the existing shortages which were authorized by the Secretary of War December 27, 1912 (see pp. 59 to 66, report for 1915), to be carried on a separate list, the result being that the total amount of this shortage has been materially reduced. The Judge Advocate General of the Army having rendered an opinion that, in view of the provisions of section 87 of the act of June 3, 1916, and the fact that these shortages had been surveyed under the provisions of the act of June 22, 1906, the value thereof could not be charged against any Federal appropriations other than those made prior to the passage of the act of June 3, 1916, i. e., against the allotment to the States concerned under section 1661, Revised Statutes, there are no funds against which these shortages can now be charged. Accordingly, recommendation was made by this office to the Secretary of War, and approved by him, that legislation be

had looking toward the relief of the States concerned from this shortage. Provision to this effect is included in the Army appropriation act for the fiscal year 1917 (act of Aug. 29, 1916), and the question finally and definitely settled.

The provision of section 87 of the act of June 3, 1916, carries out the recommendation made in the report for 1915, as to the survey, disposition, and method of charging for United States property lost, damaged, destroyed, or worn out by fair wear and tear in service, and it is confidently expected that in the future, as a result of the application of the new law, the losses for property will decrease through the better care that will be exercised by the States in its care and disposition.

There is shown below a statement as to the condition of the separate list accountability as it existed on June 30, 1916, from which it will be seen that the amount of this shortage has been reduced from \$510,540.02 in 1915 to \$383,852.57 in 1916.

	Shortages dropped from returns and separately accounted for pending final settlement.					Value of property found and taken upon returns and separate lists credited therewith between July 1, 1913, and July 1, 1916.
	1913	1914	1915	1916		
				Issuable.	Obsolete.	
Alabama.....	\$84,229.65	\$124,087.03	\$120,877.48	\$115,330.54	\$4,919.67	\$3,836.82
Arizona.....		5,310.82	4,896.08	4,575.92	320.16	414.74
Arkansas.....		115,459.26	115,459.26	3.86		115,455.40
Colorado.....		4,020.08	4,020.08	4,020.08		
District of Columbia.....	17,278.47	17,278.47	11,789.82	11,497.31	292.51	5,488.65
Florida.....	12,907.34	12,907.34	10,182.32	10,132.48	46.70	2,728.16
Georgia.....	10,303.44	10,303.44	660.42			10,303.44
Illinois.....	5,851.09	5,851.09				5,851.09
Louisiana.....	18,186.03	18,186.03	16,056.61	15,960.05		2,225.98
Mississippi.....		72,977.28	72,977.28	61,393.17	4,132.40	7,451.71
Missouri.....	2,130.65	2,130.65	2,130.65	877.83	1,215.16	37.66
Montana.....	8,267.53	8,316.01	8,308.72	6,886.83	1,421.89	7.29
New Jersey.....	2,833.02	2,833.02	2,833.02	2,551.27	281.75	
New Mexico.....		257.88	257.88	70.12	187.76	
North Carolina.....		44,093.04	16,845.98	8,751.78	7,392.11	27,949.15
Oklahoma.....	204.21	645.65	606.18	531.68		113.97
South Carolina.....			32,271.05	18,228.20	12,533.53	1,509.32
South Dakota.....	131.23	6,107.04	6,107.04	5,824.35	282.69	
Tennessee.....	40,834.49	40,834.49	40,834.49	18,841.05	21,993.44	
Texas.....		4,600.12	9,445.00	7,543.64	1,901.36	
Utah.....		6,236.34	6,236.34	4,055.74	2,180.60	
Virginia.....		28,373.47	27,044.97	22,619.83	4,355.76	1,397.88
Washington.....		699.35	699.35	163.20	536.15	
Total.....	203,157.15	531,507.90	510,540.02	319,858.93	63,993.64	184,771.26

SURVEYS.

The following table shows the value of property surveyed during the fiscal years 1915 and 1916:

	1915	1916	Increase.
Charged to the several States under section 1661 of the Revised Statutes.....	\$70,450.19	\$126,056.80	\$55,606.61
Dropped from returns without charge.....	580,107.09	623,657.77	43,550.68
Total.....	650,557.29	749,714.57	99,157.29

From the above it will be seen that there was an increase in the value of property surveyed during the fiscal year 1916 of \$99,157.29 over last year; of this amount \$55,606.61 was charged to the allotments of the several States and represents the value of property lost, damaged, or destroyed through lack of reasonable care.

CLOTHING ALLOWANCE.

The following table shows the States and the amount of clothing allowance granted to each during the fiscal year 1916, under the provisions of section 13 of the amended militia law. This allowance was not granted until it was shown as a result of the Federal inspection of 1915 that the States were uniformed, armed, and equipped as required by Circular No. 15, D. M. A., 1914 (published in my report for 1915). The clothing allowance heretofore provided for by law has been abolished by the act of June 3, 1916, and all clothing in the future must be disposed of by survey proceedings.

Clothing allowance granted the several States for the fiscal year 1916.

Alabama.....	\$21,791.67	New Hampshire.....	\$11,025.00
Arizona.....	6,183.33	New Jersey.....	34,800.00
Arkansas.....	¹ 12,891.67	New Mexico.....	7,091.67
California.....	28,666.67	New York.....	130,058.33
Connecticut.....	¹ 23,100.00	North Carolina.....	23,408.33
Delaware.....	3,750.00	North Dakota.....	5,633.33
District of Columbia.....	15,391.67	Ohio.....	44,241.67
Florida.....	¹ 11,000.00	Oklahoma.....	8,541.67
Georgia.....	22,616.67	Oregon.....	13,516.67
Hawaii.....	7,541.67	Pennsylvania.....	85,550.00
Idaho.....	7,883.33	Rhode Island.....	¹ 10,966.67
Illinois.....	46,250.00	South Carolina.....	13,241.67
Indiana.....	17,308.33	South Dakota.....	8,125.00
Iowa.....	25,766.67	Tennessee.....	13,658.33
Kansas.....	15,100.00	Texas.....	17,425.00
Kentucky.....	19,408.33	Utah.....	¹ 4,716.67
Louisiana.....	8,700.00	Vermont.....	6,083.33
Maine.....	10,733.33	Virginia.....	22,525.00
Maryland.....	¹ 15,975.00	Washington.....	10,283.33
Massachusetts.....	47,108.33	West Virginia.....	13,391.67
Michigan.....	23,108.33	Wisconsin.....	25,791.67
Minnesota.....	27,333.33	Wyoming.....	4,983.33
Mississippi.....	9,391.67		
Missouri.....	32,266.67		
Nebraska.....	12,283.33		
		Total.....	986,608.34

As stated in the annual report for the year 1915 (p. 69), steps were taken during the year to sell the material of unserviceable woolen clothing forming a part of the soldiers' uniform after these articles had been dropped under the clothing allowance allotted the States. This measure was to replace the usual total destruction of condemned and unserviceable articles of clothing. In keeping with this plan, all such woolen articles of clothing were ordered turned into a depot of the Quartermaster Corps designated by the Quartermaster General, where they were macerated and sold. The sum realized from this sale amounted to \$7,324.29. This practice can not be continued, as under the provisions of section 87 of the act of June 3, 1916, the proceeds of such sale must be deposited in the Treasury of the United

¹ Not accepted by State.

States as a credit to the State, Territory, or the District of Columbia concerned, and become a part of and an addition to that portion of the State's allotment of Federal funds set aside for the purchase of similar supplies. In the future, therefore, all such articles will after survey be ordered sold under the supervision of the State authorities and the proceeds thereof credited to the allotment of the State.

TRANSPORTATION.

The table hereto attached (marked Table 11) shows the condition of transportation as it existed in the several States at the time of the call of June 18, 1916. The data in the table refer, however, only to those organizations that were recognized by the War Department and included in the call and not those organizations that were organized after the call and included therein.

THE NATIONAL MILITIA BOARD AND THE SUBSTITUTE THEREFOR.

The National Militia Board provided by section 20 of the militia law was assembled by the Secretary of War on October 29, 1915, for the purpose of consultation with reference to the status and needs of the Organized Militia with a view to formulating a plan of legislation to be submitted to Congress. The following members of the board were present: Maj. Gen. John F. O'Ryan, Brig. Gen. Walter A. Harris, Col. Wilder S. Metcalf, and Maj. Fred Llewellyn. Gen. E. A. Wedgwood, of Utah, was unable to attend. Gen. W. A. Harris, of Georgia, had been appointed a member of the board to succeed Maj. Harry S. Berry, of Tennessee, whose term had expired since the last meeting of the board.

The Secretary of War personally explained to the board the essential principle and the purposes of the legislation which he proposed to recommend for consideration by Congress and concluded by requesting the board to aid him by their practical knowledge and suggestions to make the principle operative.

The subsequent trend of legislation rendered any further meeting of the board unnecessary.

The National Militia Board was abolished by section 81 of the act of June 3, 1916, and the President was authorized to assign a colonel and a lieutenant colonel of the National Guard to duty in the Militia Bureau with the pay and allowances of their grades.

INSPECTOR-INSTRUCTORS.

Due to the border situation the number of inspector-instructors has been materially decreased, and because of the lack of officers it has been impracticable to replace those who have been relieved, so that at the present time there are a number of States without them. Their work during the past year has been very satisfactory. Generally, progress has been made, but in varying degrees in the different States. Some States have been quite liberal in furnishing and securing transportation for the inspector-instructors, so that they were able to visit frequently and give instruction to the organizations with which they were on duty. Other States have failed to furnish any facilities for such visits, and as a consequence many companies have been deprived of the actual services of the inspector-instructors. This condition will

be remedied in large part in the future by the appropriations made under the terms of the act of June 3, 1916.

There has been cordial understanding between the State authorities and the inspector-instructors with but few exceptions. A tendency which should be corrected in the future has manifested itself in some instances of assuming that the inspector-instructor was responsible for the training of the regiment or other organization with which he was on duty. Responsibility and authority must always go together, and as the inspector-instructor can not be given the necessary authority unless commissioned in the regiment or other organization, it is plain that he can not be held responsible for the instruction and training, and his attitude heretofore has been and must continue to be that of an enthusiastic, willing, and encouraging helper, with the added duty of a friendly critic. The act of June 3, 1916, authorizes officers on duty with the National Guard to accept commissions in the same, and some States have already taken advantage of this privilege, but it is a matter that must originate with the State authorities and not with the Federal Government, though the latter should be liberal in allowing such commissions to be accepted, provided they are in offices where a Regular Army officer's experience and training can be put to the best use. They should not be allowed to accept subordinate positions, the command of small units, nor commissions in arms other than their own.

SERGEANT-INSTRUCTORS.

At the request of various State authorities 51 of the 203 sergeants on duty with the National Guard at the date of mobilization have been discharged from the Regular Army to enable them to accept commissions in the National Guard organizations called into the service of the United States by the President June 18, 1916.

Table 10 shows the number of sergeants of the different arms of the Regular Army who were on duty with the several States on June 30, 1916.

SCHOOL FOR THE SPECIAL TRAINING OF NONCOMMISSIONED OFFICERS OF THE REGULAR ARMY.

1. Under section 36 of the act of June 3, 1916, the Secretary of War is authorized to detail from the Infantry, Cavalry, Field Artillery, Corps of Engineers, Coast Artillery Corps, Medical Corps, and Signal Corps of the Regular Army not to exceed 1,000 sergeants of the Regular Army for duty with corresponding organizations of the National Guard for the purpose of assisting in the instruction of the personnel and care of property in the hands of the National Guard. Another section of the same law authorizes the President to detail for duty at institutions where one or more units of the Reserve Officers' Training Corps are maintained not exceeding 500 noncommissioned officers of the active list of the Army, who are to be additional in their respective grades to those otherwise authorized for the Army.

2. At the present time the demand for sergeants for duty with the National Guard is in excess of the number which the Secretary of War has authorized. With the passage of the law authorizing an increase in the number of sergeant-instructors the demand will have to be met to the extent that sergeants can be found who are considered capable for performing the duties. At the same time an additional

demand will be made for noncommissioned officers to be authorized for institutions maintaining one or more units of the Reserve Officers' Training Corps. These also should be specially qualified as to personal character and fitness as instructors. Coincident with these demands the probable expansion of the Regular Army will create a demand for experienced and well-instructed noncommissioned officers which the Army itself can not at once meet.

3. While it is not expected that the demand for extra noncommissioned officers for duty with the National Guard and with institutions for learning will come up at once to the maximum number to be authorized under the law, it seems quite certain that the sources of supply and the methods of selection heretofore used will be inadequate to meet the demand for well-qualified noncommissioned officers likely to arise within the next 12 months. It would be manifestly unwise to detail for duty with the National Guard or at a school or college a noncommissioned officer who is unfit in any respect or whose fitness is doubtful. It may be stated that fitness is not only a question of moral character and professional knowledge, but of ability to impart instruction.

4. These considerations seem to justify the establishment of a school for the special training of a sufficient number of enlisted men of the Regular Army whose character and intelligence give promise of measuring up to the requirements imposed by service of the character named. It is obvious that only disciplined soldiers should be sent to such a school, and this consideration suggests a minimum service of two years as a basic condition for detail.

5. The influence of such a school should be very great in the tendency it would have to standardize ideas and methods of instruction for the citizen soldiery throughout the country. This consideration is of such importance that eventually the policy should be to detail for service of this sort only those who have certificates of graduation from such a school and who otherwise have been pronounced to be well qualified for the duty.

6. It is recommended, therefore, that measures be taken to establish a permanent service school for the training of noncommissioned officers of Infantry, Cavalry, and Field Artillery in accordance with the purposes which have been stated herewith. Matters relating to location of the school, duration of the course, condition of admission, etc., are details which may well be determined later.

LEGISLATION.

The provisions of the act of Congress of June 3, 1916, relating to the National Guard are the culmination of a series of legislative enactments commencing with the militia law of 1903, whose object has been to constitute from the State militia a national force efficient for Federal purposes. The means sought to attain this object are, on the one hand, such an increased degree of Federal control as will permit of uniform and efficient organization, instruction, and discipline, and, on the other, adequate appropriations to enable the States to meet the standards established by the Federal Government.

In the hearing of the Chief, Division of Militia Affairs, before the Committees on Military Affairs of the Sixty-fourth Congress, the principal defects of the Organized Militia as constituted under the militia law of 1903 were outlined as follows:

1. ORGANIZATION.

(a) The Federal Government was empowered to establish the type of organization to which the militia was required to conform but could not require the organization of any unit. A State might maintain no militia whatever, or it could muster its entire force out of service after the expenditure upon it of a large amount of Federal funds. As each State raised its own troops independently of the others, the composition of the Organized Militia, as a whole, was not based upon the requirements of Army organization, but chiefly upon the necessities of State service, for which the troops were primarily raised.

(b) Lack of reserves.

(c) Deficiency in auxiliary arms.

2. APPOINTMENT OF OFFICERS.

No uniform qualifications for commission or promotion could be established by the Federal Government. In most States the system of election of officers by the men was the rule.

3. Lack of uniform and efficient standard of physical examination. This defect has been brought out in a striking manner by the recent mobilization of the National Guard.

4. The existence of a large fluctuating element in the enlisted personnel due to excessive number of discharges prior to expiration of term of service. During the calendar year 1915 the number of men reported so discharged was 28,126. This figure does not include organizations in which no record of such discharges was available.

5. Lack of care of Federal property.

6. Inadequate Federal appropriations, particularly for the support of auxiliary arms.

7. Lack of uniformity in the military codes of the several States, particularly in respect to terms of enlistment.

8. Lack of authority of the President to order the National Guard as such beyond the boundaries of the country.

9. Dependence upon State appropriations, which may be withdrawn or refused by a State legislature.

10. Low attendance at assemblies for drill and instruction.

11. Insufficiency of the periods of training provided by law for the development of an efficient force.

12. In general, dual control resulting from the fact that the government of the militia is a power reserved to the States.

INCREASED POWERS GRANTED BY THE ACT OF JUNE 3, 1916.

The act of June 3, 1916, conveys to the Federal Government greatly increased powers which can be applied to the correction of many of the deficiencies above enumerated. Considered in the order in which the deficiencies under previous law are above set forth, these powers relate to—

1. *Organization.*—In addition to the requirement of the militia law of 1903, that "the organization * * * shall be the same as that which is or may hereafter be prescribed for the Regular Army of the United States, subject in time of peace to such general exceptions as may be authorized by the Secretary of War," section 60 of the act of June 3, 1916, empowers the President to "prescribe the particular unit or units, as to branch or arm of service, to be main-

tained in each State, Territory, or the District of Columbia in order to secure a force which, when combined, shall form complete higher tactical units." Section 62 further provides that new organizations and existing units "shall conform to such rules and regulations regarding organization, strength, and armament as the President may prescribe," and section 64 that "for the purpose of maintaining appropriate organization and to assist in instruction the President may assign the National Guard of the several States and Territories and the District of Columbia to divisions, brigades, and other tactical units."

These powers as to organization appear to be absolutely complete. Under them there seems to be no possible legal obstacle to action by the War Department looking to the completion of the organization of tactical divisions and the completion of the Coast Artillery contingent of the National Guard, either by raising new units or by the conversion of existing Infantry units. Several States have, since the passage of the act, taken action to complete the quota assigned to them in circulars of the War Department. This is notably the case in Pennsylvania, which has practically completed the organization of its division.

Section 68 prohibits the muster out without the consent of the President of organizations upon which Federal funds have been expended.

The existing deficiency in respect to reserves is remedied by the new contract of enlistment prescribed in section 70 and the authority to determine the organization of the reserve granted by section 78. The authority contained in section 79 to organize reserve battalions for recruit training when the "members of the National Guard and the enlisted reserve thereof * * * shall have been brought into the service of the United States in time of war," completes the needed legislation on the subject of the organization of reserves. In regard to their training, however, the legislation may be considered defective in that while it provides that "members of said reserve, when engaged in field or coast-defense training with the active National Guard, shall receive the same Federal pay and allowances as enlisted men of like grade on the active list of said guard when likewise engaged," no provision is made for the appropriation of funds for that purpose or authorizing the expenditure of funds for the training of reserves from general National Guard appropriations. It is believed that this defect should be remedied in subsequent appropriation acts for the support of the National Guard.

2. *Appointment of officers.*—A practically complete remedy for the deficiencies of prior legislation in this respect is contained in section 75, which provides that, "the provisions of this act shall not apply to any person hereafter appointed an officer of the National Guard unless he first shall have successfully passed such tests as to his physical, moral, and professional fitness as the President shall prescribe." While the system of election of officers by their men existing in the majority of States may continue, the power granted by this section eliminates most of the more objectionable features of that system by providing a remedy against the election of unqualified officers.

Under the provisions of sections 74, 75, and 76, it is in the power of the President to approve or annul any commission issued by the governors of the several States in accordance with a prescribed procedure.

3. *Lack of uniform and efficient standard of physical examination.*—The militia law of 1903 was silent in respect to physical examination, except that it provided (sec. 7) that "every officer and enlisted man of the militia who shall be called forth in the manner hereinbefore prescribed (by the President) shall be mustered for service without further enlistment and without further medical examination previous to such muster, except for those States and Territories which have not adopted the standard of medical examination prescribed for the Regular Army." The large number of men rejected for physical deficiency upon examination after muster-in on the occasion of the recent mobilization of the National Guard and the Organized Militia in States which had adopted the standard of physical examination prescribed for the Regular Army, shows that the adoption of this standard by such States was for the most part purely nominal.

The act of June 3, 1916, remedies the deficiencies of prior legislation in regard to physical examination by providing (sec. 69) that "the qualifications for enlistment shall be the same as those prescribed for admission to the Regular Army" and that (sec. 110) "No money appropriated under the provisions of this or the last preceding section shall be paid * * * to any person who shall fail to qualify as to fitness for military service under such regulations as the Secretary of War shall prescribe" and (sec. 115) "Every officer and enlisted man of the National Guard who shall be called into the service of the United States as such shall be examined as to his physical fitness under such regulations as the President may prescribe without further commission or enlistment."

4. *Fluctuating element due to discharges prior to expiration of term of service.*—Section 72 conveys power to remedy this deficiency in the provision that "discharges may be given prior to expiration of terms of enlistment under such regulations as the President may prescribe." Inasmuch as under section 70 enlisted men enter into an enlistment contract both with the United States and the State, any discharges issued by the State authorities not in conformity with the regulations established by the President are invalid.

5. *Lack of care of Federal property.*—Under the militia law of 1903 the Federal Government could not require a State to reimburse it for Federal property lost or misappropriated by officers and enlisted men of the Organized Militia. This deficiency is remedied by the provision of section 87 that "if any State, Territory, or the District of Columbia shall neglect or refuse to pay, or to cause to be paid, the money equivalent of any loss, damage, or destruction of property charged against such State, Territory, or the District of Columbia by the Secretary of War after survey by a disinterested officer appointed as hereinbefore provided, the Secretary of War is hereby authorized to debar such State, Territory, or the District of Columbia from further participation in any and all appropriations for the National Guard until such payment shall have been made." Officers of the National Guard responsible for Federal property are protected against losses by officers or enlisted men to whom such property is issued by the proviso of section 110, which provides that "stoppages may be made against the compensation payable to any officer or enlisted man hereunder to cover the cost of public property lost or destroyed by and chargeable to such officer or enlisted man."

6. *Inadequate Federal appropriations.*—Appropriations under prior enactments of Congress were inadequate for the organization of the more expensive auxiliary arms necessary to complete the tactical organization of the National Guard. In addition to increased general appropriations which may be applied to this purpose, certain special appropriations are made under the act of June 3, 1916, for the purpose of the support of mounted troops. Under section 89, appropriations are made for the purchase of horses for the use of Field Artillery, Cavalry, Signal companies, and other mounted units of the National Guard, and under section 90, for the purchase and issue of forage, bedding, shoeing, and veterinary services and supplies for Government horses issued to organizations of the National Guard, and for the compensation of competent help for the care of the material, animals, and equipment issued to mounted organizations of the National Guard.

The provision made in section 67 for the payment of the actual and necessary expenses incurred by officers and enlisted men of the Regular Army when traveling on duty in connection with the National Guard will permit of a more efficient and general use of inspector instructors and sergeant instructors as supervisors of instruction of the troops of the several States.

The provisions made for the payment of enlisted men for attendance at drill and instruction should afford an incentive for such attendance and a discouragement of absenteeism, which has been one of the most serious deficiencies of the Organized Militia.

Memorandum of National Guard items, army appropriation act, 1917.

Object.	Amount.
Pay National Guard officers.....	\$9,000,000
Pay enlisted men, all grades.....	18,000,000
Automatic machine rifles.....	6,000,000
Field Artillery for National Guard.....	10,000,000
Ammunition for Field Artillery, National Guard (reserve supply).....	10,000,000
Purchase of horses.....	50,000
Forage, etc., National Guard horses.....	25,000
Helpers for animals, etc.....	25,000
National Guard encampment, maneuvers, etc.....	500,000
National Guard officers attending service schools.....	50,000
Pay National Guard officers in Militia Bureau.....	12,000
Pay property and disbursing officers, National Guard.....	44,150
Arms, equipments, etc., National Guard.....	1,000,000
Salaries, employees Militia Bureau.....	49,800
Miscellaneous office expenses, printing and binding.....	4,000
Travel expenses, officers.....	17,500
Travel expenses, inspector-instructors.....	7,500
Travel expenses, armory instruction.....	30,000
Travel expenses, officers to camps of instruction.....	30,000
Inspection target ranges.....	1,000
Inspection Field Artillery and Signal material.....	2,000
Transportation of supplies.....	75,000
Expenses of sergeant-instructors.....	50,000
Office rent, inspector-instructors.....	12,500
Arms, uniforms, equipments, etc., National Guard.....	2,000,000
Ranges, Field Artillery.....	300,000
Exchanging Infantry equipment.....	400,000
Total.....	57,685,450
Under appropriation "Subsistence of the Army," for meals or commutation of rations to enlisted men of Regular Army or National Guard competing in national matches included in general sum of \$12,000.	Regular Army appropriations in which National Guard participates not included in total.
Appropriation, Regular supplies Quartermaster Corps for National Guard officers attending service schools; also numerous other items included in general appropriation of \$11,000,000.	
Appropriation, Transportation of the Army and its supplies.	
Travel allowances of National Guard mustered into service and discharged for adequate reasons. Supplies furnished Militia, all included in general appropriation of \$23,000,000.	
Trophies and medals for rifle practice, National Guard, included in general appropriation of \$10,000.	

7. *Lack of uniformity in the military codes of several States.*—A uniform system of courts-martial, constituted like and having cognizance of the same subjects and possessing like powers except as to punishments as courts-martial of the Regular Army, and uniform limits of punishment are prescribed in sections 102-108. The President may convene courts-martial for the trial of members of the National Guard.

A uniform term of enlistment is prescribed in section 70.

These provisions will make uniform the broad features of the military codes of the several States.

8. *Lack of authority of the President to order the National Guard as such beyond the boundaries of the country.*—The draft provisions of section 111 appear to settle definitely a point of long-standing controversy with reference to the general availability of National Guard for Federal service and must be regarded as one of the most important features of recent legislation. It appears to be beyond question that under the draft provisions of section 111 the National Guard may be made available for service whenever it may be required. It is to be noted, however, that this power is exercised, not under the militia clause of the Constitution, but under the power "to raise and support armies" and that the members of drafted organizations cease to be members of the National Guard upon the application of the draft.

9. *Dependence upon State appropriations.*—The increased appropriations made pursuant to the act of June 3, 1916, appears to relieve the States of every expenditure which should not be properly borne by them. There remain to be borne by the States only the proper expenses incident to administration and to the upkeep of armories and storehouses. Up to the present time, in many States, adequate appropriations have not been made for these purposes, and armory and storehouse facilities fall in general much short of what are necessary for proper instruction and care of property. It would therefore have been desirable that the legislation should have made apportionments to the several States contingent upon their appropriating the necessary funds for this purpose. However, when deficiency in instruction or in the care of property results from insufficient armory or storehouse facilities, apportionments may be withheld for "non-compliance with Federal act" under section 116 and proper action to correct deficiencies in this respect induced.

10. *Low attendance at assemblies for drill and instruction.*—The provisions of section 110, which make payment to enlisted men contingent upon attendance at the prescribed number of drills, constitute the most effective means of enforcing such attendance provided by the new legislation. How successful it will prove, experience alone can tell.

11. *Insufficiency of training periods.*—The maximum periods of instruction provided by the act of June 3, 1916, comprise, (1) 48 assemblies for drill and instruction of one and one-half hours each, (2) 15 days encampment and maneuvers. Reckoning each day of encampment or maneuvers as comprising six hours of instruction, the total annual instruction of an enlisted man of the National Guard will be equivalent to 162 hours and for an enlistment of three years in active service, 486 hours. It is a fact proven by long military experience that a period of not less than six months continuous training (comprising practically 1,000 hours of instruction) is necessary to train a recruit to take his place as an efficient soldier in the

ranks of a trained organization. The period of training reckoned in hours of those members of a National Guard organization who have had the maximum amount of training during an enlistment period of three years will therefore be only about one-half of that required for the making of an efficient soldier. Moreover, the sum of the intermittent periods of armory instruction can not be reckoned as of equal value with periods of continuous instruction under a military régime, and the above numerical comparison does not therefore express a true ratio. However great may be the value to be attached to the training to be given to the National Guard under the provisions of the act of June 3, 1916, any expectations that it can be constituted as a force available for employment immediately or at any early date after the outbreak of a war with any first-class power are sure to prove illusory.

However, it must be recognized that the periods of training prescribed are the maximum which can be expected from men who can only devote occasional periods to military training, due to the necessity for earning a livelihood. Efficiency in training of an adequate force for national defense can only be secured through a system of universal service under which the number of able-bodied men required for national defense undergo an adequate period of intensive training during the otherwise less occupied portion of their lives and are then released to their civilian pursuits. Under such a system, the energies of the men undergoing training are not divided between two callings with resulting detriment to both, and a real division of labor is effected with consequent economic gain. Moreover, the pursuance of a settled military policy is an impossibility under our present voluntary system. The adoption of a military policy is predicated on the condition that the necessary military force will be available for its execution. So long as we are dependent upon the voluntary system, we can never be assured that the force required for the execution of any policy will be available. A system of universal liability to military training and service which distributes the burden equally on all qualified citizens is, moreover, the only one compatible with our democratic institutions.

12. *Dual control.*—Discipline, which, under the Constitution, Congress has power to prescribe, is inseparably connected with government, a power reserved to the States. Congress has prescribed the rules of discipline, and the States are obligated to enforce these rules in exercising their power of government. The act confers extensive powers on the Federal Government to prescribe the standard of training and discipline and to make the necessary regulations to carry it into effect. The government of the National Guard by the State authorities must follow the lines prescribed by the Federal Government. The means sought to enforce the regulations established by the Federal Government consist in debarring any State which fails or refuses to comply with or enforce any requirement of the act or any regulations promulgated thereunder from receiving any pecuniary or other aid, benefit, or privilege from the United States.

In this connection, the language of section 118 is deserving of attention: "The President shall make all necessary rules and regulations and issue such orders as may be necessary for the thorough organization, discipline, and government of the militia provided for in this act."

THE EFFECT OF THE DUAL OATH.

Sections 70 and 73 prescribe a dual oath of allegiance to the United States and the State by enlisted men and officers of the National Guard, respectively.

In general, the effect of this oath may be said to be:

1. To establish a uniform period of enlistment.
2. To make invalid discharges granted by State authorities not in conformity with the regulations of the Federal Government, since State authorities can not release a man from a contract entered into with the Federal Government without the approval of the latter.
3. To make unnecessary a new oath of allegiance upon muster into the Federal service.

THE MILITIA BUREAU.

Under the provisions of section 81 of the amended militia law, the "Division of Militia Affairs in the office of the Secretary of War" formerly constituted by War Department orders as a subdivision of the office of the Chief of Staff, becomes the Militia Bureau of the War Department "under the immediate supervisoins of the Secretary of War, and shall not form a part of any other bureau, office, or organization."

The National Militia Board created by the act of May 27, 1908, is abolished and the President is authorized to assign one colonel and one lieutenant colonel of the National Guard to duty in the Militia Bureau as assistants to the chief thereof.

The officers of the National Guard who can be of most service as assistants in the Militia Bureau are those who have had experience in an administrative capacity, particularly as quartermasters and disbursing officers. As a general rule experience of this sort should be a necessary qualification for assignment.

In drafting the provisions of the act of June 3, 1916, it was the evident intention of Congress to exercise to its full extent its constitutional powers to "provide for organizing, arming, and disciplining the militia" within the limit, "reserving to States, respectively, the appointment of the officers and the authority of training the militia according to the discipline prescribed by Congress." The National Guard is federalized as far as it can be federalized under the constitutional restrictions.

This was the desire of the representatives of the National Guard Association as expressed in their hearings before the Committee on Military Affairs of Congress. There is, however, considerable evidence that the construction placed upon the term "federalization" by these representatives did not involve vesting in the Federal Government the greatest amount of control over the National Guard consistent with the terms of the Constitution. On the contrary, a report of a "legislative committee" of the National Guard Association proposed in November, 1915, to reduce the already inadequate powers conferred on the Federal Government in the militia law of 1903 by securing the adoption of a constitutional amendment which would place the very important power of determining the organization of the National Guard, now a prerogative of the Federal Government, in the hands of the States. The adoption of such an amendment would have resulted in complete heterogeneity in the composition

of the militia of the several States and would have destroyed all possibility of developing the National Guard into a force organized to meet the necessities of national defense. Further evidences of the opposition to any real federalization is found in draft of a bill "to provide for the organization, armament, discipline, and government of Militia of the United States and to further provide for the national defense" (committee print, J. 26698-1) which was offered with the sanction of the executive committee of the National Guard Association. The outstanding feature of this draft was the creation of a militia section of the General Staff, composed entirely of National Guard officers, with powers so extensive as practically to insure the control of the National Guard by its own members and to destroy such power as was possessed by the War Department to control the training of the militia as an effective Federal force. The tendency of the proposed legislation may be gathered from certain provisions here mentioned. The scope of the examinations to determine the fitness of candidates for commission in the National Guard was to be determined by the militia section of the General Staff, the examinations themselves to be conducted by boards appointed by the governors of States or Territories. Regulations fixing the standard of military fitness which should entitle members of the National Guard to Federal pay were to be prescribed by the militia section. Although projects evolved by the militia section could not be carried into effect until approved by the Secretary of War, he could not reverse their decision and put into effect plans which appeared to him more effective, but could only interpose his objection, and if the militia section persisted, a deadlock would result. These provisions are of importance when considered in connection with the subsequent amendment to the Army reorganization act which was urged, for the addition of five militia officers to the General Staff. It is difficult to escape the conclusion that the purpose of this amendment was to create in the city of Washington a body of militia officers in whose hands the control of militia affairs would be vested and through whom a practically complete independence from Federal control would be attained.

Such a result would be deplorable. It would involve the predominance of local interest over the interests of general national defense. Two systems would have been built up, the existence of which, side by side, would have destroyed all idea of the coordinated action under a common control which is the real significance of federalization. It would be almost inevitable that militia officers serving in such a capacity would become the representatives of local interests and the wielders of local influence for the benefit of local interests in national military affairs in much the same way that this function was exercised by a group of National Guard representatives in bringing local influence to bear on the legislation enacted at the recent session of Congress. Their official position would give sanction to their statements, and their nonamenability to military jurisdiction would relieve them from a sense of responsibility for their actions.

It is but just to say that there was not full concurrence on the part of the National Guard in the views of their representatives and in the measures advocated by them. Probably the provisions of the new

defense act as they apply to the National Guard much more nearly conform to the ideals and sentiments of the National Guard as a body than the original measure proposed by the committee of National Guard representatives.

It is believed that under the act of June 3, 1916, the powers of Congress to vest control over the National Guard in the Federal Government have been practically exhausted. Every power that can be granted to the War Department has been conferred, and the needs of the National Guard in respect to compensation have been met. This leaves no further material legislative changes to be sought to increase the efficiency of the system. A failure to attain a reasonable degree of efficiency with the facilities provided will be attributable only to defects too inherent in the militia system to be subject to correction by legislative action.

PERSONNEL OF BUREAU AND OFFICE FORCE.

The Division of Militia Affairs, created by War Department orders of February 12, 1908, as a division in the office of the Secretary of War, and subsequently made a division of the General Staff, was by section 81 of the act of June 3, 1916, created a bureau of the War Department, known as the Militia Bureau and placed under the immediate supervision of the Secretary of War.

At present the following officers are on duty in the Militia Bureau: Col. George W. McIver, Infantry; Col. William C. Brown, Cavalry (temporary duty); Lieut. Col. Charles Gerhardt, Infantry; Lieut. Col. Charles P. Summerall, Field Artillery; Maj. Louis T. Hess, Medical Corps; Maj. Curtis W. Otwell, Corps of Engineers; Maj. Henry B. Clark, Coast Artillery Corps; Capt. Dana T. Merrill, Third Infantry; Capt. John L. De Witt, Quartermaster Corps; Capt. William N. Hughes, jr., Infantry; Capt. Frank R. Curtis, Signal Corps; Capt. Thomas M. Spaulding, Coast Artillery Corps; Capt. George A. Lynch, Infantry.

Since the last annual report the following officers were, in accordance with the provisions of the enactment by Congress relative to detached service of officers, relieved from duty as assistants to the Chief of the Militia Bureau: Maj. Charles A. Hedekin, Cavalry, and Maj. John W. Heavey, Infantry.

Capt. Russel C. Langdon, Infantry, was on temporary duty in the Militia Bureau from October 29, 1915, to March 16, 1916, pending the interval between the departure of Maj. Heavey and the arrival of Maj. Gerhardt.

Capt. Samuel R. Gleaves, Cavalry, was relieved from duty in the Militia Bureau July 6, 1916, to accept a commission as lieutenant colonel of the First Cavalry, Pennsylvania National Guard.

Capt. Robert I. Rees, Third Infantry, and Capt. Lewis D. Greene, United States Army, retired, were temporarily on duty in the Militia Bureau from June 23 to July 28, 1916, and from June 29 to August 10, 1916, respectively.

All the officers who have been on duty in the division and bureau have been faithful and efficient in the performance of their duties.

Maj. Gen. A. L. Mills, United States Army, the distinguished Chief of the Militia Bureau, died September 18, 1916, after a brief illness.

He served as Chief of the Division of Militia Affairs and as Chief of the Militia Bureau from September 1, 1912, to the date of his death. His administration was marked by important progress in the organization, equipment, and instruction of the National Guard.

The clerical force of the bureau has labored faithfully and efficiently in performing the great amount of paper work required, and particularly that necessitated by the mobilization of the Organized Militia and National Guard, and by the new legislation affecting the National Guard. As a consequence, the customary vacations authorized by law have had to be greatly curtailed and in a number of instances the privilege denied altogether. This condition will be relieved somewhat by the increase of eight additional clerks authorized by the Army appropriation act. Recommendation is made for the authorization of five additional clerks at salaries commensurate with the duties performed and which will be required under the changed status of the National Guard and of this office. It is remarked in this connection that the clerical salaries of the bureau are the lowest in the War Department—a condition which should be remedied in justice to a hard-working, loyal personnel.

Respectfully submitted.

G. W. McIVER,
Colonel, Infantry,
Acting Chief of the Militia Bureau

THE SECRETARY OF WAR.

TABLE 1.—*Strength of the National Guard in 1915 and 1916 as reported by inspecting officers (less the strength of organizations not recognized by the War Department), and detailed statement of gains and losses.*

State, Territory, or District.	1915		1916		Gain (+); loss (-).	
	Officers.	Enlisted men.	Officers.	Enlisted men.	Officers.	Enlisted men.
Alabama.....	164	2,615	166	2,391	+ 2	- 224
Arizona.....	53	742	54	866	+ 1	+ 124
Arkansas.....	105	1,547	81	834	- 24	- 713
California.....	249	3,440	245	3,218	- 4	- 222
Colorado.....	119	1,637	58	770	- 61	- 867
Connecticut.....	195	2,772	227	3,476	+ 32	+ 704
Delaware.....	40	450	35	426	- 5	- 24
District of Columbia.....	129	1,847	94	1,741	- 35	- 106
Florida.....	95	1,320	85	1,181	- 10	- 139
Georgia.....	229	2,714	225	2,859	- 4	+ 145
Hawaii.....	61	905	93	2,548	+ 32	+1,643
Idaho.....	58	946	63	901	+ 5	- 45
Illinois.....	522	5,550	500	6,099	- 22	+ 549
Indiana.....	132	2,077	150	2,411	+ 18	+ 334
Iowa.....	211	3,092	218	3,182	+ 7	+ 90
Kansas.....	123	1,812	127	1,925	+ 4	+ 113
Kentucky.....	163	2,329	170	2,252	+ 2	- 77
Louisiana.....	68	1,044	63	1,119	- 5	+ 75
Maine.....	101	1,288	111	1,428	+ 10	+ 140
Maryland.....	156	1,917	168	2,024	+ 12	+ 107
Massachusetts.....	426	5,653	418	6,600	- 8	+ 947
Michigan.....	188	2,773	220	3,430	+ 32	+ 657
Minnesota.....	227	3,280	210	2,889	- 17	- 391
Mississippi.....	78	1,127	71	1,085	- 7	- 42
Missouri.....	227	3,872	207	3,746	- 20	- 126
Montana.....	45	663	50	734	+ 5	+ 71
Nebraska.....	119	1,474	110	1,507	- 9	+ 33
Nevada ¹	91	1,323	83	1,175	- 8	- 148
New Hampshire.....	296	4,176	301	4,021	+ 5	- 155
New Jersey.....	60	851	67	867	+ 7	+ 16
New Mexico.....	1,002	15,607	1,014	15,309	+ 12	- 298
New York.....	211	2,809	208	2,846	- 3	+ 37
North Carolina.....	56	676	55	735	- 1	+ 59
North Dakota.....	487	5,309	492	5,916	+ 5	+ 607
Ohio.....	69	1,025	70	966	+ 1	- 59
Oklahoma.....	104	1,622	96	1,596	- 8	- 27
Oregon.....	762	10,266	701	9,450	- 61	- 816
Pennsylvania.....	90	1,316	90	1,527	.....	+ 211
Rhode Island.....	136	1,589	102	1,424	- 34	- 165
South Carolina.....	67	975	65	857	- 2	- 118
South Dakota.....	107	1,639	113	1,634	+ 6	- 5
Tennessee.....	145	2,091	185	2,720	+ 40	+ 629
Texas.....	32	566	32	546	.....	- 20
Utah.....	73	730	76	878	+ 3	+ 148
Vermont.....	200	2,703	197	2,808	- 3	+ 105
Virginia.....	82	1,234	90	1,358	+ 8	+ 124
Washington.....	117	1,607	106	1,505	- 11	- 102
West Virginia.....	196	3,095	192	3,247	- 4	+ 152
Wisconsin.....	34	598	35	579	+ 1	- 19
Wyoming.....						
Total.....	8,705	120,693	8,589	123,605	-116	+2,912

¹ No Organized Militia (mustered out May 20, 1905).

TABLE 2.—Statement showing the strength (officers and enlisted men) of the National Guard of each State, the Territory of Hawaii, and the District of Columbia each year since the enactment of the militia law on Jan. 21, 1903, as determined by the annual inspections under section 14 of the militia law, the strength for 1915 and 1916 being less the strength of organizations not recognized by the War Department.

	1903-1916														Decreases.
	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	
Alabama.....	3,318	2,808	2,391	2,035	2,194	3,314	3,237	3,130	3,436	2,809	3,772	3,779	3,667	761	
Arizona.....	382	386	380	331	317	631	745	980	843	522	680	735	920		
Arkansas.....	1,731	1,902	1,172	1,137	1,362	1,456	1,566	1,356	1,467	1,359	1,511	1,452	915	616	
California.....	2,490	2,404	2,356	2,089	2,694	2,640	2,994	2,219	3,426	3,612	3,856	3,669	3,463	17	
Colorado.....	1,052	1,898	1,074	999	643	946	1,160	1,343	1,618	1,446	2,055	1,766	828	264	
Connecticut.....	2,572	2,758	2,514	2,726	2,707	2,863	2,682	2,682	2,723	2,641	2,684	2,967	3,703	1,131	
Delaware.....	369	352	366	369	400	401	379	377	378	482	506	490	461	72	
District of Columbia.....	1,294	1,354	1,512	1,378	1,572	1,455	1,646	1,437	1,530	1,646	1,845	1,976	1,836	641	
Florida.....	1,291	1,210	1,564	1,120	1,246	1,343	1,222	1,109	1,246	1,220	1,148	1,416	1,266	28	
Georgia.....	4,664	3,789	3,191	2,700	2,745	3,032	2,913	2,618	2,913	2,898	2,715	2,943	2,094	1,000	
Hawaii.....	673	473	849	416	428	606	608	553	616	463	914	966	2,041	2,068	
Idaho.....	449	659	718	678	468	681	704	639	656	640	897	1,004	864	816	
Illinois.....	6,609	6,621	6,269	5,929	6,140	6,685	6,335	6,205	6,107	5,914	5,955	6,072	6,569	70	
Indiana.....	2,204	2,676	2,451	1,966	2,063	2,491	2,240	2,391	2,502	2,476	2,778	2,209	2,561	337	
Iowa.....	2,364	2,484	2,355	2,809	2,730	2,799	2,202	3,101	3,040	2,981	3,231	3,303	3,400	1,036	
Kansas.....	1,320	1,261	1,302	1,155	1,237	1,612	1,673	1,906	1,879	1,804	1,862	1,935	2,052	732	
Kentucky.....	1,261	1,817	1,304	1,872	1,448	2,100	2,117	1,911	1,726	2,012	2,374	2,497	2,472	1,161	
Louisiana.....	1,406	1,083	1,412	1,521	1,279	1,369	1,796	1,991	1,979	1,142	1,074	1,112	1,182	316	
Maine.....	1,168	1,252	1,191	1,261	1,233	1,328	1,261	1,360	1,462	1,448	1,512	1,389	1,539	261	
Maryland.....	2,006	2,307	2,006	1,942	1,969	2,068	2,038	1,814	1,869	1,972	2,143	2,073	2,192	186	
Massachusetts.....	5,739	5,669	5,506	5,669	5,571	5,961	5,846	5,836	5,864	5,798	5,793	6,079	7,018	1,279	
Michigan.....	3,031	2,793	2,612	2,667	2,612	2,792	2,716	2,896	2,811	2,750	2,867	2,861	3,630	619	
Minnesota.....	2,026	1,971	1,826	1,906	2,064	2,048	2,749	2,805	2,865	2,942	3,463	3,507	3,000	1,073	
Mississippi.....	3,140	1,153	1,300	1,262	1,198	1,423	1,507	1,441	1,294	1,443	1,084	1,206	1,156	16	
Missouri.....	5,078	2,769	2,337	2,263	2,010	3,440	2,933	2,710	3,267	3,576	4,064	4,099	3,953	876	
Montana.....	533	568	530	421	534	641	748	762	769	610	676	708	794	346	
Nebraska.....	1,689	1,439	1,461	1,401	1,374	1,092	1,147	1,320	1,269	1,172	1,516	1,693	1,617	20	
Nevada.....	140	167	146	141	10	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	140	
New Hampshire.....	1,319	1,191	1,270	1,242	1,243	1,676	1,276	1,274	1,263	1,256	1,570	1,414	1,239	61	
New Jersey.....	4,651	4,523	4,618	4,866	4,463	4,466	4,143	4,063	4,279	4,362	4,313	4,472	4,772	389	
New Mexico.....	371	263	410	266	268	308	944	949	764	648	897	911	934	563	
New York.....	13,869	12,760	14,264	14,017	14,234	15,484	15,266	14,631	15,467	16,567	16,565	16,609	16,721	2,454	
North Carolina.....	1,860	1,823	1,799	1,867	1,869	2,118	2,320	2,203	2,438	2,568	2,578	2,620	3,051	1,304	
North Dakota.....	808	760	677	656	646	727	746	656	667	629	739	732	700	16	
Ohio.....	5,677	5,548	5,532	5,869	5,841	6,026	6,000	5,979	5,980	6,140	6,127	5,796	6,408	731	
Oklahoma.....	879	617	676	771	631	994	960	1,016	968	952	1,407	1,094	1,036	157	
Oregon.....	1,262	1,068	1,100	1,063	964	1,569	1,519	1,366	1,464	1,467	1,601	1,726	1,691	629	

¹ No organized militia (mustered out May 20, 1903).

TABLE 2.—Statement showing the strength (officers and enlisted men) of the National Guard of each State, the Territory of Hawaii, and the District of Columbia each year since the enactment of the militia law on Jan. 21, 1903, as determined by the annual inspections under section 14 of the militia law, the strength for 1915 and 1916 being less the strength of organizations not recognized by the War Department—Continued.

State, Territory, or District.	Total strength, commissioned and enlisted.														1903-1916	
	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	Increase.	Decrease.
Pennsylvania.....	9,068	9,728	9,820	9,884	9,888	10,048	10,508	10,421	10,617	10,448	10,534	10,935	11,028	10,151	1,083	.....
Rhode Island.....	1,025	1,047	1,035	1,066	1,050	1,077	1,151	1,134	1,298	1,357	1,358	1,399	1,406	1,617	592	.....
South Carolina.....	3,692	3,745	2,782	1,665	1,770	1,889	1,931	1,956	1,902	1,969	1,909	1,950	1,725	1,526	.....	2,166
South Dakota.....	1,335	1,215	846	757	639	626	780	794	886	870	679	941	1,042	922	.....	413
Tennessee.....	1,915	2,140	1,986	1,763	1,553	1,541	1,523	1,640	1,513	1,863	1,834	1,915	1,746	1,747	.....	168
Texas.....	3,266	3,080	2,601	2,151	2,169	2,234	2,594	2,729	2,725	2,749	2,561	2,923	2,236	2,905	.....	361
Utah.....	376	324	329	397	351	367	406	370	367	373	354	448	598	578	202	.....
Vermont.....	701	746	754	761	731	844	830	831	829	881	845	892	803	954	253	.....
Virginia.....	2,271	2,422	2,138	2,133	1,900	1,966	2,392	2,420	2,197	2,427	2,699	2,812	2,903	3,005	734	.....
Washington.....	822	871	773	738	682	695	1,023	1,330	1,264	1,292	1,238	1,400	1,316	1,448	628	.....
West Virginia.....	1,140	1,076	1,111	1,011	936	1,084	1,310	1,444	1,341	1,318	1,383	1,621	1,724	1,611	471	.....
Wisconsin.....	2,857	2,935	2,793	2,897	2,904	3,019	3,096	3,033	3,007	3,089	2,963	3,124	3,291	3,439	582	.....
Wyoming.....	360	333	312	353	356	480	449	650	641	644	688	814	632	614	254	.....
Total.....	116,547	115,110	111,057	106,693	105,213	110,941	118,926	119,660	117,988	121,852	120,802	128,043	129,398	132,194	23,160	7,513

TABLE 3.—Statement showing in detail the strength of the Organized Militia, Dec. 31, 1915, as reported in the annual returns of the adjutant-general of the respective States, the Territory of Hawaii, and the District of Columbia (first row of figures), and as reported at the annual inspections made Jan. 1 to Mar. 31, 1916, in accordance with the provisions of section 14 of the militia law (second row of figures), the latter less the strength of the organizations not recognized by the War Department.

State, Territory, or District.	General officers of the line.		Officers, Adjutant General's Department.		Officers, Inspector General's Department.		Officers, Judge Advocate General's Department.		Quartermaster Corps or Department.		Subsistence Department.		Medical Department.		Pay Department.		Corps of Engineers.		Ordnance Department.		Signal Corps.		Cavalry.		Field Artillery.		Coast Artillery Corps.		Infantry.		Total.		Aggregate.
	Officers.	Enlisted men.	Officers.	Enlisted men.	Officers.	Enlisted men.	Officers.	Enlisted men.	Officers.	Enlisted men.	Officers.	Enlisted men.	Officers.	Enlisted men.	Officers.	Enlisted men.	Officers.	Enlisted men.	Officers.	Enlisted men.	Officers.	Enlisted men.	Officers.	Enlisted men.	Officers.	Enlisted men.	Officers.	Enlisted men.	Officers.	Enlisted men.			
Alabama.....	1	2	1	59	.....	14	59	.....	1	61	.....	16	469	.....	143	2,459	183	3,048	3,231										
Arizona.....	.....	1	.....	13	59	.....	4	24	.....	.....	.....	9	161	.....	134	2,100	166	2,391	2,557							
Arkansas.....	.....	1	.....	4	24	.....	.....	.....	.....	.....	.....	.....	.....	.....	44	856	51	880	931			
California.....	1	4	1	25	141	.....	5	16	.....	.....	.....	.....	.....	.....	47	850	54	866	920							
Colorado.....	.....	2	.....	11	26	.....	11	24	.....	.....	.....	.....	.....	.....	96	1,716	115	1,742	1,857					
Connecticut.....	.....	2	.....	9	66	.....	3	35	.....	.....	.....	.....	.....	.....	62	810	81	834	915					
Delaware.....	.....	2	.....	21	121	.....	8	46	.....	.....	.....	.....	.....	.....	143	2,024	253	3,428	3,681					
District of Columbia.....	1	2	1	22	136	.....	9	46	.....	.....	.....	.....	.....	.....	131	1,859	245	3,218	3,463							
Florida.....	.....	2	.....	3	10	.....	3	35	.....	.....	.....	.....	.....	.....	36	538	73	848	921					
	.....	2	.....	2	4	.....	3	46	.....	.....	.....	.....	.....	.....	21	292	58	770	828					
	.....	2	.....	22	136	.....	21	121	.....	.....	.....	.....	.....	.....	94	1,704	196	3,625	3,821					
	.....	2	.....	22	136	.....	22	136	.....	.....	.....	.....	.....	.....	103	1,638	227	3,476	3,703					
	.....	1	.....	3	10	.....	3	10	.....	.....	.....	.....	.....	.....	32	380	39	391	430					
	.....	1	.....	2	4	.....	2	4	.....	.....	.....	.....	.....	.....	29	421	35	426	461					
	1	2	1	12	62	.....	12	62	.....	.....	.....	.....	.....	.....	61	1,394	92	1,799	1,991							
	1	2	1	12	65	.....	12	65	.....	.....	.....	.....	.....	.....	62	1,326	94	1,741	1,835							
	.....	2	.....	8	22	.....	8	22	.....	.....	.....	.....	.....	.....	81	1,386	95	1,410	1,505					
	.....	2	.....	6	22	.....	6	22	.....	.....	.....	.....	.....	.....	73	1,157	85	1,181	1,266					

TABLE 3.—Statement showing in detail the strength of the Organized Militia, Dec. 31, 1915, as reported in the annual returns of the adjutants general of the respective States, the Territory of Hawaii, and the District of Columbia (first row of figures), and as reported at the annual inspection made Jan. 1 to Mar. 31, 1916, in accordance with the provisions of section 14 of the militia law (second row of figures), the latter less the strength of the organizations not recognized by the War Department—Continued.

State, Territory, or District.	General officers of the line.	Officers, Adjutant General's Department.		Officers, Inspector General's Department.		Officers, Judge Advocate General's Department.		Quartermaster Corps or Department.		Subsistence Department.		Medical Department.		Pay Department.		Corps of Engineers.		Ordnance Department.		Signal Corps.		Cavalry.		Field Artillery.		Coast Artillery Corps.		Infantry.		Total.		Aggregate.
		Officers.	Enlisted men.	Officers.	Enlisted men.	Officers.	Enlisted men.	Officers.	Enlisted men.	Officers.	Enlisted men.	Officers.	Enlisted men.	Officers.	Enlisted men.	Officers.	Enlisted men.	Officers.	Enlisted men.	Officers.	Enlisted men.	Officers.	Enlisted men.	Officers.	Enlisted men.	Officers.	Enlisted men.	Officers.	Enlisted men.			
Georgia.....	1	3	1	1	1	1	5	4	...	...	23	107	...	...	2	...	...	...	17	238	14	310	16	176	150	1,977	233	2,812	3,045
Hawaii.....	1	3	1	1	1	1	5	4	...	...	15	76	...	...	2	...	...	...	18	233	13	269	16	206	150	2,071	225	2,839	3,084
Idaho.....	...	2	1	1	1	1	3	1	...	...	14	28	...	...	...	...	4	63	1	...	...	...	...	...	130	2,745	156	2,903	3,059
Illinois.....	...	2	1	1	1	1	4	1	...	...	4	21	...	...	1	1	...	...	...	...	...	...	...	...	80	2,525	93	2,548	2,641
Indiana.....	...	1	1	1	1	1	3	...	...	...	...	6	16	...	1	...	...	...	...	...	...	...	...	...	50	852	63	808	931
Iowa.....	2	6	3	3	3	3	13	...	...	...	...	48	264	...	...	5	67	3	...	...	...	...	...	...	51	884	63	901	964
Kansas.....	2	6	3	3	3	3	14	...	...	...	...	49	252	...	...	5	69	3	1	...	...	...	...	...	340	4,313	500	6,099	6,599
Kentucky.....	...	1	1	1	1	1	4	...	...	...	...	18	122	...	...	...	...	...	...	...	...	...	...	...	129	2,137	173	2,637	2,810
Louisiana.....	...	1	...	...	...	...	...	...	...	...	...	19	119	...	...	...	...	...	...	...	...	...	...	...	111	1,903	150	2,411	2,561
...	1	2	...	...	...	...	2	...	...	...	...	26	143	...	...	4	72	1	...	...	...	...	...	...	148	2,377	219	3,288	3,507
...	1	2	...	...	...	...	3	...	...	...	...	28	138	...	...	4	66	1	...	...	...	...	...	...	147	2,370	218	3,182	3,400
...	...	2	1	1	1	1	5	...	...	...	...	9	37	...	...	...	...	1	...	...	...	...	...	...	102	1,692	128	1,904	2,082
...	...	2	1	1	1	1	5	...	...	...	...	5	41	...	...	...	...	1	...	...	...	...	...	...	104	1,683	127	1,925	2,052
...	1	2	1	...	...	...	3	...	...	...	...	15	92	...	...	...	...	1	...	...	...	...	...	...	153	2,315	179	2,461	2,640
...	1	2	1	...	...	...	3	1	...	...	...	15	90	...	...	...	...	1	...	...	...	...	...	...	147	2,161	170	2,262	2,422
...	...	1	1	1	1	1	2	2	...	...	...	8	26	...	...	...	...	1	...	...	...	...	...	...	42	877	70	1,094	1,164
...	...	1	1	1	1	1	3	2	...	...	...	5	35	...	...	...	...	1	...	...	...	...	...	...	41	809	63	1,119	1,182

Maine.....	1	1	1	1	115	745	1,407	1,532
Maryland.....	1	1	1	1	111	765	1,438	1,539
Massachusetts.....	1	1	1	2	172	1,940	2,217	2,289
	1	2		3	165	1,747	2,024	2,192
	2	4	1	12	424	4,087 ^a	6,199	6,633
					418	4,356	6,600	7,015
Michigan.....					221	2,602	2,417	2,638
Minnesota.....					220	2,708	3,450	3,650
Mississippi.....					223	2,202	3,002	3,224
					210	2,226	2,888	3,099
Missouri.....					80	1,303	1,391	1,471
					71	1,060	1,083	1,156
Montana.....					227	2,352	4,066	4,313
					207	2,080	3,746	3,953
Nebraska.....					61	831	848	907
					66	719	734	784
Nevada.....					115	1,394	1,537	1,672
					116	1,347	1,507	1,617
New Hampshire.....					92	765	1,279	1,371
					83	732	1,175	1,258
New Jersey.....					305	3,439	4,123	4,428
					301	3,324	4,021	4,322
New Mexico.....					63	731	878	941
					67	743	857	904
New York.....					11,016	9,820	16,997	17,013
					11,014	9,333	15,309	15,329
North Carolina.....					222	2,345	2,981	3,203
					208	2,241	2,948	3,084
North Dakota.....					69	696	690	719
					65	711	735	790
Ohio.....					551	5,976	7,144	7,695
					492	4,725	6,816	6,408

^a Includes 3 aids to division and brigade commanders.

¹ No Organized Militia (mustered out May 26, 1906).

TABLE 3.—Statement showing in detail the strength of the Organized Militia, Dec. 31, 1915, as reported in the annual returns of the adjutants general of the respective States, the Territory of Hawaii, and the District of Columbia (first row of figures), and as reported at the annual inspections made Jan. 1 to Mar. 31, 1916, in accordance with the provisions of section 14 of the militia law (second row of figures), the latter less the strength of the organizations not recognized by the War Department—Continued.

State, Territory, or District.	General officers of the line.	Officers, Adjutant General's Department.		Officers, Inspector General's Department.		Officers, Judge Advocate General's Department.		Quartermaster Corps Department.		Subsistence Department.		Medical Department.		Pay Department.		Corps of Engineers.		Ordnance Department.		Signal Corps.		Cavalry.		Field Artillery.		Coast Artillery Corps.		Infantry.		Total.		Aggregate.				
		Officers.	Enlisted men.	Officers.	Enlisted men.	Officers.	Enlisted men.	Officers.	Enlisted men.	Officers.	Enlisted men.	Officers.	Enlisted men.	Officers.	Enlisted men.	Officers.	Enlisted men.	Officers.	Enlisted men.	Officers.	Enlisted men.	Officers.	Enlisted men.	Officers.	Enlisted men.	Officers.	Enlisted men.	Officers.	Enlisted men.							
Oklahoma.....	.....	1	10	54	3	75	1	6	146	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	78	1,252	1,330
Oregon.....	.....	1	7	30	.....	.....	1	3	56	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	93	1,466	1,559
Pennsylvania.....	4	7	68	219	6	120	7	50	723	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	96	1,596	1,691
Rhode Island.....	4	7	60	216	6	117	8	50	712	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	701	9,450	10,151
South Carolina.....	.....	1	9	46	.....	.....	1	9	180	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	93	1,426	1,519
South Dakota.....	.....	1	9	16	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	90	1,527	1,617
Tennessee.....	1	17	105	115	1,652	1,767		
Texas.....	1	2	18	64	102	1,424	1,526		
Utah.....	1	3	19	118	1,808	1,926	
	1	17	105	113	1,634	1,747	
	2	18	64	190	2,688	2,878	
	2	14	37	185	2,720	2,905	
	1	3	19	32	512	544
	1	3	20	32	546	578

¹ No Organized Militia (mustered out May 20, 1903).

TABLE 5.—Statement showing, by tactical divisions and arms of the service, the total enlisted Militia, as determined by the annual inspection made Jan. 1 to Mar. 31, 1916, pursuant to

Divisions.	Coast Artillery.		Infantry.				Cavalry.				Field Artillery.				Engineers.		Signal troops.		Sanitary troops.				Total men. ¹	
	Companies.	Men.	Separate companies.	Separate battalions.	Regiments.	Men.	Separate troops.	Separate squadrons.	Regiments.	Men.	Separate batteries.	Separate battalions.	Regiments.	Men.	Separate companies.	Battalions.	Companies.	Battalions.	Men.	Ambulance companies.	Field Hospital companies.	Hospital Corps detachments.		Men.
Fifth:																								
Maine.....	13	624			1	706	1			59	1											2	36	1,426
New Hampshire.....	3	187			1	792				262												1	26	1,253
Massachusetts.....	12	890			5	4,356		1		262		2									1	10	241	6,590
Vermont.....					1	735				188												1	17	940
Rhode Island.....	17	1,098					3			200	1										1	1	68	1,523
Connecticut.....	13	823			2	1,636	2			123	3	1									1	4	136	3,452
Total.....	58	3,521	1	1	10	8,296	6	2		632	5	3					3		210	3	2	19	524	15,163

¹ The figures given in the column "Total men" do not include the Organized Militia of Hawaii, which does not belong to any one of the 12 tactical divisions, or the enlisted men belonging to the several staff departments (Quartermaster (orps and Ordnance Department). With the exceptions stated, the table shows the strength of all organizations inspected.

TABLE 5.—Statement showing, by tactical divisions and arms of the service, the total enlisted strength of the Organized Militia, as determined by the annual inspection made Jan. 1 to Mar. 31, 1916, pursuant to section 14, militia law—Continued.

Divisions.	Coast Artillery.		Infantry.				Cavalry.				Field Artillery.				Engineers.			Signal troops.			Sanitary troops.				Total men.
	Companies.	Men.	Separate companies.	Separate battalions.	Regiments.	Men.	Separate troops.	Separate squadrons.	Regiments.	Men.	Separate batteries.	Separate battalions.	Regiments.	Men.	Separate companies.	Battalions.	Men.	Companies.	Battalions.	Men.	Ambulance companies.	Field Hospital companies.	Hospital Corps detachments.	Men.	
Sixth:																									
New York.....	32	2,111	.....	.....	13	9,434	.....	1	1	1,131	.....	.....	2	1,324	.....	2	532	.....	1	129	4	2	31	693	15,354
Seventh:																									
Pennsylvania.....	.....	.....	.....	1	11	8,391	.....	.....	1	712	6	.....	.....	625	.....	2	117	1	.....	52	.....	2	12	216	10,113
Eighth:																									
Delaware.....	.....	.....	.....	2	.....	421	.....	.....	.....	243	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	4	425
New Jersey.....	.....	.....	.....	.....	5	3,334	.....	1	.....	.....	.....	.....	.....	241	.....	.....	.....	.....	.....	60	1	1	8	142	4,020
Maryland.....	.....	.....	.....	.....	3	1,839	.....	.....	.....	56	1	.....	.....	123	.....	.....	.....	.....	.....	.....	1	1	3	92	2,110
District of Columbia.....	1	75	.....	.....	1	1,328	.....	.....	.....	.....	2	.....	.....	195	.....	.....	.....	.....	.....	75	.....	1	2	65	1,736
Virginia.....	.....	.....	.....	.....	3	2,554	.....	.....	.....	.....	1	.....	.....	432	.....	.....	.....	.....	.....	62	.....	1	5	63	3,111
West Virginia.....	.....	.....	.....	.....	2	1,581	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	42	1,623
Total.....	1	75	1	4	14	14,055	1	1	.....	299	6	1	.....	991	.....	.....	.....	3	.....	197	2	4	21	408	13,025
Ninth:																									
North Carolina.....	6	370	.....	.....	3	2,301	2	.....	.....	106	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	3	129	2,906
South Carolina.....	1	65	.....	.....	2	1,516	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	41	1,622
Florida.....	.....	.....	.....	.....	2	1,390	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	22	1,412
Georgia.....	4	206	.....	1	3	2,071	1	1	.....	233	.....	1	.....	269	.....	.....	.....	.....	.....	.....	.....	1	4	76	2,855
Total.....	11	641	.....	1	10	7,278	3	1	.....	339	.....	1	.....	269	.....	.....	.....	.....	.....	.....	1	2	11	268	8,795
Tenth:																									
Alabama.....	.....	.....	.....	.....	3	2,100	.....	.....	.....	.....	2	.....	.....	161	.....	.....	.....	1	.....	71	.....	.....	3	59	2,391
Mississippi.....	.....	.....	.....	.....	.....	1,255	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	21	1,276
Tennessee.....	.....	.....	.....	.....	1	1,567	1	.....	.....	60	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	105	1,732
Kentucky.....	.....	.....	.....	.....	3	2,258	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	90	2,348
Total.....	.....	.....	.....	4	6	7	1	.....	.....	60	2	.....	.....	161	.....	.....	.....	1	.....	71	1	2	9	275	7,747

Eleventh:															
Michigan.....															
Ohio.....															
Total.....															
Twelfth:															
Illinois.....															
Indiana.....															
Total.....															
Thirteenth:															
Wisconsin.....															
Minnesota.....															
North Dakota.....															
South Dakota.....															
Iowa.....															
Total.....															
Fourteenth:															
Missouri.....															
Kansas.....															
Nebraska.....															
Colorado.....															
Wyoming.....															
Total.....															
Fifteenth:															
Arkansas.....															
Arizona.....															
New Mexico.....															
Texas.....															
Oklahoma.....															
Louisiana.....															
Total.....															
Sixteenth:															
California.....															
Oregon.....															
Washington.....															
Montana.....															
Utah.....															
Idaho.....															
Total.....															
Aggregate.....															

TABLE 6.—Statement showing increase and decrease of organizations in the National Guard for the past year.

Arms of service.	Number of regiments.				Number of separate battalions or squadrons.				Number of separate companies, troops, and batteries; ambulance companies and field hospitals.				Increase or decrease by largest tactical unit.	
	1915.	1916.	Increase.	Decrease.	1915.	1916.	Increase.	Decrease.	1915.	1916.	Increase.	Decrease.		
Infantry.....	124	122	....	2	20	15	....	5	26	20	....	6	Decrease...	Per ct. 1.61
Cavalry.....	3	3	....	....	10	12	2	....	21	29	8	....	Increase...	20.00
Field Artillery.....	3	10	7	....	11	9	....	2	21	19	....	2	Increase...	233.34
Corps of Engineers.....	....	1	1	....	3	1	....	2	7	16	9	....	Increase...	100.00
Signal Corps.....	....	....	....	....	2	4	2	....	17	25	8	....	Increase...	200.00
Sanitary units.....	....	....	....	....	....	....	....	....	46	62	16	....	Increase...	34.78
Coast Artillery Corps.....	....	....	....	....	....	....	....	....	126	144	18	....	Increase...	14.29
Machine-gun units:	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Infantry.....	....	....	....	....	....	....	....	....	27	59	32	....	Increase...	118.52
Cavalry.....	....	....	....	....	....	....	....	....	1	3	2	....	Increase...	200.00

TABLE 7.—Statement showing, by States, the number of males of military age (18 to 44 years, inclusive), according to the census of 1910, the proportion that the strength of the Organized Militia bears to this number, and the relative order of each State, based on the per cent of the number of males of military age in the Organized Militia.

State, Territory, or District.	Strength of Organized Militia.	Number of males of military age per Federal census of 1910.	Per cent in Organized Militia.	Relative order.
Alabama.....	3,231	401,145	0.80	19
Arizona.....	931	58,962	1.57	3
Arkansas.....	1,857	311,792	.59	36
California.....	3,681	665,522	.55	38
Colorado.....	921	203,982	.45	44
Connecticut.....	3,821	257,996	1.48	5
Delaware.....	430	44,634	.96	12
District of Columbia.....	1,891	78,349	2.41	2
Florida.....	1,505	171,688	.87	15
Georgia.....	3,045	497,095	.64	29
Hawaii.....	3,059	64,663	4.73	1
Idaho.....	931	86,384	1.07	10
Illinois.....	6,846	1,330,556	.51	40
Indiana.....	2,810	580,557	.48	42
Iowa.....	3,507	475,829	.73	22
Kansas.....	2,032	370,227	.54	39
Kentucky.....	2,640	457,493	.57	37
Louisiana.....	1,164	338,343	.34	49
Maine.....	1,522	151,325	1.00	11
Maryland.....	2,389	271,373	.88	13
Massachusetts.....	6,633	760,324	.87	14
Michigan.....	3,638	616,729	.59	35
Minnesota.....	3,224	491,113	.65	27
Mississippi.....	1,471	345,745	.42	45
Missouri.....	4,313	721,166	.60	34
Montana.....	907	123,232	.73	23
Nebraska.....	1,672	267,497	.66	26
Nevada ¹.....	....	....	....	....
New Hampshire.....	1,371	90,357	1.51	4
New Jersey.....	4,428	597,513	.74	21
New Mexico.....	941	73,097	1.28	6
New York.....	17,013	2,156,361	.78	20
North Carolina.....	3,203	392,192	.81	17
North Dakota.....	719	145,628	.49	41
Ohio.....	7,695	1,076,928	.71	24
Oklahoma.....	1,330	357,933	.37	47
Oregon.....	1,559	190,553	.81	18

¹ No Organized Militia (mustered out May 20, 1906).

TABLE 7.—Statement showing, by States, the number of males of military age (18 to 44 years, inclusive), according to the census of 1910, the proportion that the strength of the Organized Militia bears to this number, and the relative order of each State, based on the per cent of the number of males of military age in the Organized Militia—Continued.

State, Territory, or District.	Strength of Organized Militia.	Number of males of military age per Federal census of 1910.	Per cent in Organized Militia.	Relative order.
Pennsylvania.....	10,855	1,788,619	0.60	33
Rhode Island.....	1,519	125,213	1.21	7
South Carolina.....	1,767	276,788	.63	32
South Dakota.....	925	140,635	.65	28
Tennessee.....	1,926	423,088	.45	43
Texas.....	2,878	804,980	.35	48
Utah.....	544	84,449	.64	31
Vermont.....	853	73,685	1.16	9
Virginia.....	3,279	398,728	.82	16
Washington.....	1,308	340,872	.38	46
West Virginia.....	1,756	275,048	.64	30
Wisconsin.....	3,290	497,922	.66	25
Wyoming.....	664	54,654	1.21	8
Total.....	139,894	20,508,964	.68	.....

TABLE 8.—Enlisted personnel, service, physique, etc.

State, Territory, or District.	Service. ¹					Discharged during the preceding calendar year and not re-enlisted, who completed 3 years honorable service in the Organized Militia.	Who were discharged for any reasons during the preceding calendar year before expiration of term of service.	Who were not examined by a medical officer or civilian physician prior to enlistment in accordance with standard prescribed for Regular Army.	Who apparently do not conform to physical standard prescribed for Regular Army.	Who are apparently under 18 years of age.	Who have been discharged for physical disability during the preceding calendar year.	Number of present members of organization who have received the complete antityphoid inoculation for the prevention of typhoid fever.
	Less than 3 months.	3 or more months and less than 1 year.	1 or more years and less than 3 years.	3 or more years and less than 10 years.	With 10 or more years.							
Alabama.....	177	593	1,096	341	34	173	566	20	34	.....	13	236
Arizona.....	45	237	344	188	32	44	166	.....	63	2	7	191
Arkansas.....	200	577	732	189	8	26	244	1,518	26	26	1	395
California.....	395	831	1,276	810	84	649	1,367	33	1	8	9	29
Colorado.....	244	249	314	144	20	126	214	338	2	4	4	182
Connecticut.....	329	1,099	1,184	648	122	386	486	.....	17	4	20	295
Delaware.....	81	67	168	97	13	81	157	314	6	.....	.....	38
District of Columbia.....	45	448	711	421	112	168	334	.....	4	.....	6	394
Florida.....	101	440	498	169	11	72	352	.....	4	.....	12	23
Georgia.....	412	570	1,083	709	74	406	987	27	107	1	8	214
Hawaii.....	890	968	370	176	33	59	106	186	73	16	4	49
Idaho.....	95	272	396	128	10	131	47	29	17	13	.....	157
Illinois.....	856	2,097	2,121	1,249	233	592	1,026	10	45	7	24	2,064
Indiana.....	217	771	1,023	462	66	234	929	.....	14	3	11	381
Iowa.....	362	896	1,270	610	63	356	921	61	4	3	17	248
Kansas.....	171	403	864	458	29	167	286	.....	87	23	6	52
Kentucky.....	216	609	962	503	29	421	316	10	2	5	18	36
Louisiana.....	163	271	467	213	5	91	114	30	24	1	6	185
Maine.....	118	407	526	232	39	154	260	3	38	2	5	147
Maryland.....	331	432	878	380	96	245	415	.....	8	10	14	312
Massachusetts.....	936	1,698	2,266	1,407	279	654	1,757	1	7	12	11	2,361
Michigan.....	458	973	1,338	558	87	311	599	.....	11	5	18	289
Minnesota.....	469	603	1,269	713	87	399	1,024	19	9	5	5	391
Mississippi.....	75	380	1,572	283	16	48	181	1,217	30	5	8	44
Missouri.....	518	1,440	1,513	498	46	396	1,495	66	19	5	3	83
Montana.....	105	137	322	103	7	47	83	546	3	2	3	4
Nebraska.....	194	467	757	200	17	93	206	62	9	3	.....	122
Nevada.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
New Hampshire.....	128	187	548	329	54	147	215	.....	.....	.....	2	201
New Jersey.....	437	742	1,706	906	230	665	1,111	150	7	1	3	195
New Mexico.....	73	185	352	164	16	34	15	757	31	29	3	157

New York.....	15,410	1,654	3,191	5,898	3,691	1,024	2,608	2,289	14	163	56	61	11,139
North Carolina.....	2,906	263	739	1,229	546	56	273	614	1,743	39	7	26	1,037
North Dakota.....	790	156	124	294	193	15	61	181	78	5	3	3	2
Ohio.....	6,501	569	1,882	2,398	1,281	160	805	1,488	63	90	53	16	182
Oklahoma.....	1,167	176	267	500	210	14	69	284	826	2	.....	8	133
Oregon.....	1,505	341	298	625	286	45	240	744	.....	1	.....	2	58
Pennsylvania.....	10,127	674	2,437	4,013	2,463	528	1,229	2,471	214	103	21	48	473
Rhode Island.....	1,527	259	320	525	362	60	132	404	.....	19	7	2	273
South Carolina.....	1,622	141	479	516	428	63	97	332	858	75	46	10	105
South Dakota.....	1,857	134	232	362	126	3	100	212	736	21	22	2	128
Tennessee.....	1,734	289	407	647	326	63	167	575	732	65	11	33	227
Texas.....	2,720	412	716	1,110	347	31	108	396	24	38	18	10	77
Utah.....	546	108	72	229	120	9	90	119	294	33	20	1	4
Vermont.....	943	237	241	301	159	15	68	260	12	.....	.....	3	147
Virginia.....	3,112	376	802	1,173	692	80	439	659	1	21	3	16	101
Washington.....	1,358	263	392	479	222	12	108	477	.....	5	.....	6	300
West Virginia.....	1,623	134	322	754	387	26	294	104	115	20	17	4	396
Wisconsin.....	3,247	372	593	1,183	910	193	439	594	.....	18	5	2	531
Wyoming.....	579	53	105	309	102	10	34	6	925	14	20	1	119
Total.....	129,333	15,442	32,608	49,445	26,134	4,353	14,786	28,126	13,031	1,434	510	493	24,886

Regular Army service and service in the Organized Militia of another State included. No Organized Militia (mustered out May 20, 1906).

TABLE 9.—Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection.

(NOTE.—Where no action by the Division of Militia Affairs is shown as a result of the inspection, the conditions were considered satisfactory.)

ALABAMA.

Table of organization.
First, Second, and Fourth Infantry.
type E.

Gov. Charles Henderson.
Montgomery. Inspector-
Infantry, Field Artillery—

Organization.	Station.	Strength at inspection.			Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).						Action taken by Division of Militia Affairs as result of inspection.		
		Officers.		Enlisted men.		Consecutive days on practice march.		Consecutive days in camp services for instruction.		Assemblies for drill and instruction.		Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).	
		Present.	Absent.	Total.	Present.	Absent.	Total.	Number.	Average actual attendance.	Number.			Average actual attendance.
General officers of the line.....	Laverne.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Adjutant General's Department.....	Montgomery.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Inspector General's Department.....	do.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Quartermaster Corps.....	do.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ordinance Department.....	do.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Medical Department:													
Detachments—													
First Infantry.....	Mobile.....	3	2	5	14	4	19	.....	8	21	16	10	24
Second Infantry.....	Montgomery.....	2	1	3	20	1	21	.....	8	20	69	14	.....
Fourth Infantry.....	Birmingham.....	5	.....	5	13	6	19	1	8	21	29	15	13
Total.....	.....	10	3	13	47	12	59	.....	8	62	.....	39	42

Signal Corps:			
First Field Company.....	Montgomery		
Field Artillery:			
Battery A.....	Birmingham		
Battery C.....	do.....		
Total.....			
First Infantry:			
Field officers, etc.....	Mobile.....		
Headquarters company.....	do.....		
Band section.....	do.....		
Machine-gun company.....	do.....		
Supply company.....	do.....		
Company A.....	do.....		
Company B.....	Bay Minnett		
Company C.....	Geneva.....		
Company D.....	Fort Deposit		
Company E.....	Mobile.....		
Company F.....	Dothan.....		
Company G.....	Brewton.....		
Company H.....	Troy.....		
Company I.....	Enterprise.....		
Company K.....	Castleberry.....		
Company L.....	Slacomb.....		
Company M.....	Mobile.....		
Total.....			
Second Infantry:			
Field officers, etc.....	Montgomery		
Headquarters company.....	do.....		
Band section.....	Osark.....		
Machine-gun company.....	Montgomery		
Supply company.....	do.....		
Company A.....	do.....		
Company B.....	Birmingham		
Company C.....	do.....		
Company D.....	Montgomery		
Company E.....	Florida.....		
Company F.....	Tuscaloosa.....		
Company G (vacant).....	do.....		
Company H.....	Andalusia.....		
Company I.....	Luverne.....		
Company K.....	Florence.....		
Company L.....	Tallapoosa.....		
Company M.....	Sainsen.....		
Total.....			

Records burned in fire.

No record.

Placed on probation.

Do.

Do.

Do.

Do.

Do.

Do.

Do.

Do.

Do.

Do.

Do.

Do.

Do.

Do.

TABLE 9.—Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.

ALABAMA—Continued.

Organization.	Station.	Strength at inspection.			Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).				Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).	Action taken by Division of Militia Affairs as result of inspection.	
		Enlisted men.			Consecutive days on practice march.		Consecutive days in camp service for instruction.				
		Present.	Absent.	Total.	Number.	Average actual attendance.	Number.	Average actual attendance.	Number.		
Fourth Infantry:	Montgomery	5	2	7						Placed on probation. Do. Do. Do. Do. Do. Do.	
	do.	2	10	12			8	23	15		
	Opelika										
	Montgomery	1	1	2							
	do.	2	26	28	2	26		45	28		
	do.	2	55	57	2	27		51	27		
	Abbeville	2	40	42				53	45		
	Pell City	3	44	47				55	50		
	Bessemer	3	50	53				42	53		
	New Decatur	3	34	37				43	30		
	Gadsden	3	45	48	3	43		50	45		
	Ozark	3	40	43				42	37		
	Alexander City	2	65	67				49	47		
	Opelika	2	30	32	2	30		47	34		
	Birmingham	2	20	22				48	30		
	Alabama City	2	47	49				48	33		
	Oxford	2	47	49	2	48		48	33		
	Total	42	547	589		133		505	441	297	
	Aggregate inspected and recognized	100	1,944	2,044		447		1,931	1,316	970	

ARIZONA.

State designation: Arizona National Guard.
State headquarters: Phoenix. Commander in chief: Gov. George W. P. Hunt. Adjutant General: Col. George W. Harris, address, Phoenix. Inspector-instructor: None.
Infantry: First Infantry.
Sanitary troops: 1 detachment.

Table of organization.

Organization.	Station.	Strength at inspection.			Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).						Action taken by Division of Militia Affairs as result of inspection.			
		Officers.		Enlisted men.		Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.				
		Present.	Absent.	Total.	Present.	Absent.	Total.	Number.	Average actual attendance.	Number.		Average actual attendance.	Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).	
Adjutant General's Department.	Phoenix.....	1		1										
Quartermaster Corps.....	do.....	1		1										
Medical Department:														
Detachment Hospital Corps ..	Tucson.....	2		2	16		16		12	15	26	9		3
Medical Corps ¹		3		3										
Total.....		5		5	16		16			15		9		3
First Infantry:														
Field officers, etc.....	Morenci.....	6		6										
Headquarters company	do.....	3		3	2	2	4		12	19	(⁵) 49	(⁵) 20	(⁵) 8	
Band section.....	Phoenix.....				11	14	25		12	26				
Machine-gun company	Morenci.....	2		2										
Supply company	do.....	1		1			1							
Company A.....	Phoenix.....	2	1	3	22	60	82		12	51	33	30	59	
Company B.....	do.....	3	1	4	8	66	74		12	47	31	19	69	
Company C.....	Tempe.....	1	2	3	23	44	66		12	54	(⁵) 31	(⁵) 10	50	
Company D.....	Mesa.....	3		3	23	34	57		12	41	32		54	
Company E.....	Tucson.....	3		3	47	18	65		12	53	29	34	13	
Company F.....	Phoenix.....	3		3	37	38	75		12	57	13	31	78	
Company G.....	Douglas.....	2		2	33	22	55		12	44	39	8	35	
Company H.....	Ray.....	3		3	47	22	69				10	33	66	

¹ Not serving with troops.

² No record.

TABLE 9.—Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.

ARIZONA—Continued.

Organization.	Station.	Strength at inspection.				Instruction during year ended Dec 31, 1915 (sec. 18, militia law).								Action taken by Division of Militia Affairs as result of inspection.			
		Officers.		Enlisted men.			Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.		Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).				
		Present.	Absent.	Total.	Present.	Absent.	Total.	Number.	Average actual attendance.	Number.	Average actual attendance.	Number.					
First Infantry—Continued.																	
Company I.....	Flagstaff.....	3	.....	3	19	50	69	.....	.....	.....	.....	.....	48	Placed on probation.
Company K.....	Tucson.....	2	1	3	41	38	79	.....	.....	.....	.....	.....	58	Do.
Company L.....	Yuma.....	2	.....	2	46	25	71	.....	.....	.....	.....	.....	.....
Company M.....	Morenci.....	3	.....	3	39	19	58	.....	.....	.....	.....	.....	34	
Total.....		42	5	47	398	452	850	.....	.....	.....	.....	.....	572	
Aggregate inspected and recognized.		49	5	54	414	452	866	.....	.....	.....	.....	.....	575	

ARKANSAS.

Table of organization.

Infantry: First and Second Infantry.
Sanitary troops: 2 detachments.

Organization.	Station.	Strength at inspection.						Instruction during year ended Dec. 31, 1915 (sec. 15, militia law).						Action taken by Division of Militia Affairs as result of inspection.
		Officers.			Enlisted men.			Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.		Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).
		Present.	Absent.	Total.	Present.	Absent.	Total.	Number.	Average actual attendance.	Number.	Average actual attendance.	Number.	Average actual attendance.	
Adjutant General's Department.	Little Rock.	1	1	2										
Inspector General's Department.	do.		1	1										
Judge Advocate General's Department.	do.	1		1										
Quartermaster Corps.	do.	2	1	3										
Ordnance Department.	do.	1		1										
Medical Department:														
Detachments:														
First Infantry.	Beebe.	3		3	12		12							
Second Infantry.	Dardanelle.	1	1	2	6	6	12							
Medical Corps.		5	1	6										
Total.		9	2	11	18	6	24							
First Infantry:														
Field officers, etc.	Eureka Springs.	7		7										
Headquarters company.	do.	3	1	4	3	6	9							
Band section.	Hope.				25	3	28							
Machine-gun company.	Eureka Springs.	1		1										
Supply company.	do.	3		3										
Company A.	Heber Springs.	1	1	2	30	3	33	1		10	40	1		
Total.														

1 No record.

2 Not serving with troops.

Placed on probation.
Do.

Do.

Company B.....	Fayetteville.....
Company C.....	Dardanelle.....
Company D.....	Fort Smith.....
Company E.....	Paris.....
Company F.....	Magazine.....
Company G.....	Russellville.....
Company H.....	Beaumontville.....
Company I.....	Menard.....
Company K.....	Oark.....
Company L.....	Ola.....
Company M.....	Harrison.....
Total.....	.....
Aggregate inspected.....	.....
Aggregate recognised.....	.....

No Record.

Do.....	San Diego.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
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1 No record.

Not serving with troops.

Mounted.

‘Dismounted’

TABLE 9.—Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.

CALIFORNIA—Continued.

Organization.	Station.	Strength at inspection.			Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).						Action taken by Division of Militia Affairs as result of inspection.			
		Officers.			Enlisted men.			Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.		
		Present.	Absent.	Total.	Present.	Absent.	Total.	Number.	Average actual attendance.	Number.		Average actual attendance.	Number.	Average actual attendance.
Second Infantry:	Chico.....	6	6	Recognition with-drawn. Placed on probation. Do. Do. Do. Do. Do. Recognition with-drawn. Placed on probation.
Field officers, etc.....	do.....	4	.....	4	6	1	7	.....	.....	.....	.....	.....	.....
Headquarters company.....	do.....	.....	.....	.....	24	1	25	.....	.....	8	27	37	20
Band section.....	do.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Machine-gun company.....	do.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Supply company.....	do.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Company A.....	do.....	3	.....	3	58	8	66	.....	.....	16	52	50	46
Company B.....	Willows.....	3	.....	3	38	24	62	.....	.....	16	30	46	22
Company C.....	Fresno.....	3	.....	3	45	5	50	2	27	8	26	51	28
Company D.....	Isalia.....	3	.....	3	49	12	61	.....	.....	16	49	39	57
Company E.....	Sacramento.....	3	.....	3	41	.....	41	.....	.....	8	29	53	27
Company F.....	Woodland.....	2	.....	2	45	11	56	.....	.....	8	17	49	30
Company G.....	Sacramento.....	3	.....	3	26	9	35	.....	.....	8	17	53	21
Company H.....	Willare.....	2	.....	2	32	19	51	.....	.....	(1)	(1)	46	20
Company I.....	Oroville.....	2	.....	2	44	15	59	.....	.....	(1)	(1)	46	19
Company K.....	Fresno.....	3	.....	3	32	8	40	.....	.....	16	32	55	32
Company L.....	Bakersfield.....	2	1	3	35	17	52	1	36	16	39	49	34	
Company M.....	Hanford.....	2	1	3	37	17	54	.....	.....	16	26	38	36
Total.....	43	2	45	512	147	659	63	354	392	410

Fifth Infantry:															
Field officers, etc.	6														
Headquarters company	4						5	1	6						
Band section							22	6	28						
Machine-gun company	2														
Supply company	2	1													
Company A	3						39	14	53						
Company B	3						38	20	58	4					
Company C	3						62	3	65		30				
Company D	3						47	10	57						
Company E	3						41	17	58						
Company F	3						25	19	44	(1)	(1)				
Company G	1	2					47	16	63						
Company H	2						44	17	61						
Company I	3						46	18	64						
Company K	3						48	13	61						
Company L	3						42	19	61						
Company M	3						24	32	56	2	24				
Total	47	3	50				530	205	735		54		247	339	289
Seventh Infantry:															
Field officers, etc.	6														
Headquarters company	4						7		7						
Band section							22	6	28						
Machine-gun company	3						48		48						
Supply company	4														
Company A	2						39	5	44	(1)	(1)				
Company B							7		7						
Company C	2						21	8	29						
Company D	3						66		66						
Company E							46	11	57	2	16				
Company F		1					22	15	37						
Company G	3						47	12	59						
Company H	3						42	16	58						
Company I	2						45	2	47	2	30				
Company K	3						34	23	57						
Company L	3						55	4	59						
Company M	2	1					27	13	40						
Total	43	2	45				528	115	648		81		398	409	246
Aggregate inspected	240	14	254				2,656	740	3,396		452		2,241	1,806	1,544
Aggregate recognized	232	13	245				2,537	681	3,218						

¹ No record.

² Includes 1 first lieutenant, unassigned, attached to machine-gun company.

TABLE 9 — *Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.*

COLORADO.

State designation: Colorado National Guard.
 State headquarters: Denver. Commander in chief: Gov. George A. Carlson. Adjutant General: Brig. Gen. Harry P. Gamble; address, Denver. Inspector-instructors: Infantry—Capt. Walter T. Bates, Infantry, Cavalry—None; Field Artillery—Capt. William F. Sharp, Field Artillery.

Table of organization.

and B.

Organization.	Station.	Strength at inspection.				Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).						Action taken by Division of Militia Affairs as result of inspection.	
		Officers.		Enlisted men.		Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.			Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).
		Present.	Absent.	Total.	Present.	Absent.	Total.	Number.	Average actual attendance.	Number.	Average actual attendance.		
Adjutant General's Department.	Denver	1	1	2	46	20	66	10	26	10	26	0	
Judge Advocate General's Department.	do.	1	1	2	46	20	66	10	26	10	26	0	
Quartermaster Corps.	do.	1	1	2	46	20	66	10	26	10	26	0	
Ordnance Department.	do.	1	1	2	46	20	66	10	26	10	26	0	
Medical Department:	do.	2	3	5	46	20	66	10	26	10	26	0	
First Field Hospital.	do.	4	3	7	46	20	66	10	26	10	26	0	
Medical Corps.	do.	4	3	7	46	20	66	10	26	10	26	0	
Total.		4	3	7	46	20	66	10	26	10	26	0	
Corps of Engineers:													
Company A.	Golden	3	.....	3	37	9	46	.....	.....	37	26	21	

										Do.	
Signal Corps:										8	19
Company A.....	Denver.....	3		3	18	11	29			18	11
Detachment Company A.....	Trinidad.....	1		1	17	1					
Total.....		4		4	35	12	47			29	27
Cavalry:											
First Squadron—											
Headquarters.....	Denver.....	2		2							
Troop A (vacant).....											
Troop B.....	Denver.....	2		2	32	6	38			11	38
Troop C.....	do.....	2	1	3	26	8	34			19	20
Troop D.....	Boulder.....	2		2	56	1	57			14	53
Total.....		8	1	9	114	15	129			23	111
Field Artillery:											
Battery A.....	Fort Collins.....	1		1	89	8	97			85	71
Battery B.....	Denver.....	3		3	71	22	93			25	
Total.....		4		4	160	30	190			110	71
First Infantry:											
Headquarters Second Bat-	Denver.....	3		3	1		1				
tallon.....											
Headquarters Third Bat-	do.....	2	1	3	1		1				4
tallon.....											
Company B.....	do.....	2	1	3	20	15	35			17	28
Company G.....	do.....	2		2	43	9	52			14	33
Company I.....	Fort Morgan.....	2		2	18	6	24			19	6
Company K (vacant).....											
Company L.....	Denver.....	1		1	39	14	53			12	25
Company M (vacant).....											
Total.....		12	2	14	122	44	166			62	96
Second Infantry:											
Headquarters Second Bat-	Delta.....	2	1	3	1		1				
tallon.....											
Headquarters Third Bat-	Lamar.....	2	1	3		1	1				4
tallon.....											
Company C.....	do.....	1	1	2	39	49	88			12	14

1 Dismounted.

2 Mounted

3 Not serving with troops.

TABLE 9.—Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.

COLORADO—Continued.

[illegible]

CONNECTICUT.

Table of expenditures.

(prod).

Connecticut Field

Organisation.	Station.	Strength at inspection.				Enlisted men.			Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).				Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).	Action taken by Division of Militia Affairs as result of inspection.		
		Officers.		Total.		Present.	Absent.	Total.	Consecutive days on practice march.		Consecutive days in camp service for instruction.				Assemblies for drill and instruction.	
		Present.	Absent.	Number.	Average actual attendance.				Number.	Average actual attendance.	Number.	Average actual attendance.				
Hartford.....		16	4	22	135	11	136	1	20	11	46	35	38	1		
do.....		3		3												
do.....		1		1												
do.....		1	1	2												
do.....		1	1	2												
do.....		1	1	2												
New Haven.....		3	1	4	25	1	26			10	20	25	20	13		
do.....		3		3												
do.....		2	1	3	15	1	16					6	17			
Bridgeport.....		1	1	2	23	2	24			10	32	30	17	9		
Hartford.....		3		3	11	1	12			6	17	36	13	6		
Waterbury.....		3	1	4	18	1	19			6	23	25	19	7		
do.....		3		3												
Medical Corps 1.....																
Total.....		16	4	22	135	11	136		20		123		124	41		

Not serving with troops.

TABLE 9.—Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.

CONNECTICUT—Continued.

Organization.	Station.	Strength at inspection.			Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).						Action taken by Division of Militia Affairs as result of inspection.		
		Officers.		Enlisted men.	Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assembles for drill and instruction.			Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).	
		Present.	Absent.		Total.	Number.	Average actual attendance.	Number.	Average actual attendance.	Number.			Average actual attendance.
Signal Corps: First Connecticut Wire Company.	Hartford.....	3	1	3	71	3	74	7	16	35	47	46	
Fifth Militia Cavalry: Troop A.....	New Haven.....	3	.....	3	50	8	58	12	135	18	159	.....	.....
Troop B.....	Hartford.....	3	.....	3	65	.....	65	13	145	18	173	16	.....
Total.....	.....	6	.....	6	115	8	123	.....	180	.....	1 121	16	.....
Tenth Militia Field Artillery: First Battalion—	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Headquarters.....	New Haven.....	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Battery A.....	do.....	4	1	5	121	5	126	.....	.....	4	128	.....	.....
Battery B.....	do.....	5	.....	5	118	2	120	.....	.....	4	117	.....	.....
Battery C.....	do.....	5	.....	5	121	6	127	.....	.....	4	127	.....	.....
Total.....	.....	16	1	17	360	13	373	.....	.....	.....	372	.....	.....
Separate Battery D.....	New Haven.....	5	.....	5	82	8	90	.....	.....	4	104	.....	.....
Separate Battery E.....	Branford.....	4	.....	4	69	12	81	.....	.....	24	62	86	.....
Separate Battery F.....	Stamford.....	2	1	3	102	12	114	.....	.....	9	85	.....	.....

DELAWARE.

Table of organization.

Infantry: First Infantry.
Sanitary troops: 1 detachment.

State designation: Organized Militia of Delaware.
State headquarters: Wilmington. Commander in chief: Gov. Charles R. Miller.
Adjutant General: Brig. Gen. I. P. Wickersham; address, Wilmington. Inspector-
Instructors: Infantry—Capt. Urm M. Diller, Infantry; Medical Corps—Maj. Conrad
E. Koeper, Medical Corps.

Organization	Station	Strength at inspection.				Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).						Action taken by Division of Militia Affairs as result of inspection.	
		Officers.		Enlisted men.		Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.			Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).
		Present.	Absent.	Total.	Present.	Absent.	Total.	Number.	Average actual attendance.	Number.	Average actual attendance.		
Ordinance Department.....	Wilmington.....	1	1	2	1	1	2	1	1	1	1	1	
	do.....	1	1	2	1	1	2	1	1	1	1	1	
	do.....	1	1	2	1	1	2	1	1	1	1	1	
Medical Department: Detachment First Infantry.....	do.....	1	1	2	3	1	4	7	8	(1)	(1)	5	
	do.....	1	1	2	3	1	4	7	8	(1)	(1)	5	
	do.....	2	2	4	3	1	4	7	8	(1)	(1)	5	
First Infantry: Field officers, etc.....	Wilmington.....	4	4	8	4	1	5	8	23	43	43	1	
	do.....	3	3	6	19	4	23	8	23	30	43	1	
	do.....	1	1	2	2	1	3	3	2	24	4	20	
Machine-gun company (vol- cant).....	do.....	3	3	6	43	1	44	8	42	57	57	20	Placed on probation.
Supply company.....	Wilmington.....	3	3	6	43	1	44	8	42	57	57	20	
Company A.....	do.....	3	3	6	43	1	44	8	42	57	57	20	

1 No record.

1 Not serving with troops.

1 No record.

2 Not serving with troops.

TABLE 9.—Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.

CONNECTICUT—Continued.

Organization.	Station.	Strength at inspection.			Enlisted men.			Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.		Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).	Action taken by Division of Militia Affairs as result of inspection.
		Officers.		Total.	Present.	Absent.	Total.	Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.			
		Present.	Absent.					Number.	Average actual attendance.	Number.	Average actual attendance.	Number.	Average actual attendance.		
				Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).											
Second Connecticut Infantry—Continued.															
Company E.....	New Haven.....	3	3	49	7	56	6	62	35	47	24	
Company F.....	do.....	3	.....	3	76	.....	76	.....	.....	6	67	34	68	22
Company G.....	Waterbury.....	2	1	3	45	3	48	.....	.....	6	43	35	43	.....
Company H.....	do.....	3	.....	3	59	2	61	.....	.....	6	60	34	50	21
Company I.....	Meriden.....	3	.....	3	44	7	51	.....	32	6	64	36	40	21
Company K.....	Wallingford.....	3	.....	3	40	.....	40	.....	.....	6	49	32	33	17
Company L.....	Meriden.....	3	.....	3	50	2	52	.....	.....	6	35	37	39	18
Company M.....	Torrington.....	3	.....	3	61	1	62	.....	.....	6	65	34	65	8
Total.....	.....	50	2	52	760	48	808	.....	32	.....	790	.....	675	260
First Connecticut Separate Company of Infantry.....	New Haven.....	3	.....	3	54	4	58	.....	.....	6	70	33	59	25
Aggregate inspected and recognized.....	.....	215	12	227	3,205	271	3,476	.....	195	.....	2,652	.....	2,849	1,133

DELAVAR

State designation: Organized Militia of Delaware.
State headquarters: Wilmington, Commander.
Adjutant General: Brig Gen. I. P. Wickham.
Instructors: Infantry—Capt. Urra M. Diller, In-
E. Koerber, Medical Corps.

Table of contents

Infantry: First Infantry.
Sanitary troops: 1 detachment.

Organization	Station	Strength at inspection						Instruction during year ended Dec. 31, 1915 (sec. 18, militia law)						Action taken by Division of Militia Affairs as result of inspection	
		Officers			Enlisted men			Consecutive days on practice march		Consecutive days in camp service for instruction		Assemblies for drill and instruction			Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction)
		Present	Absent	Total	Present	Absent	Total	Number	Average actual attendance	Number	Average actual attendance	Number	Average actual attendance		
Ordnance Department	Wilmington	1		1											
	do	1	1	1											
	do	1		1											
	do	1		1	1										
	do	1		1											
Medical Department: Detachment First Infantry Medical Corps	do	1		1	3	1	4	(1)	(1)	7	3	(1)	(1)	5	
		1		1											
		2		2	3	1	4				3			5	
First Infantry: Field officers, etc Headquarters company Band section Machine-gun company (vacant) Supply company Company A	Wilmington	4		4										1	
	do	3		3	4	1	5								
	do				19	4	23			8	23	33	43		
		3		3	2		2			8	2	24	4		
	do	3		3	42	1	43			8	42	57	3	30	Placed on probation.

1 No record.

***Not serving with troops.**

Placed on probation.

DISTRICT OF COLUMBIA.

United States designation: National Guard of the District of Columbia.
 Headquarters: Washington. Commander in Chief: President of the United States.
 Adjutant General: Maj. Joseph C. Castner (major of Infantry, United States Army);
 address, Wash-
 ington, Field.
 Infantry, Field.
 Artillery—Capt.
 John A. Brockmeyer

Table of organization.

1: Third Infantry; First Separate Battalion

and B.

2 detachments.

Organisation.	Station.	Strength at inspection.				Instruction during year ended Dec. 31, 1915 (sec. 13, militia law).								Action taken by Division of Militia Affairs as result of inspection.	
		Officers.		Enlisted men.		Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assembles for drill and instruction.		Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).			
		Present.	Absent.	Total.	Present.	Absent.	Total.	Number.	Average actual attendance.	Number.	Average actual attendance.				
General officers of the line.....	Washington.....	1	1	2	1	1	4	1	1	1	1	1	1	1	1
Adjutant General's Department.....	do.....	1	1	2	1	1	1	1	1	1	1	1	1	1	1
do.....	do.....	1	1	2	1	1	1	1	1	1	1	1	1	1	1
do.....	do.....	1	1	2	1	1	1	1	1	1	1	1	1	1	1
do.....	do.....	1	1	2	1	1	1	1	1	1	1	1	1	1	1
do.....	do.....	1	1	2	1	1	1	1	1	1	1	1	1	1	1
Medical Department:	do.....	5	5	10	5	5	10	5	5	10	5	5	10	5	5
Field Hospital No. 1.....	do.....	5	5	10	5	5	10	5	5	10	5	5	10	5	5
Detachments—	do.....	4	4	8	4	4	8	4	4	8	4	4	8	4	4
Third Infantry.....	do.....	4	4	8	4	4	8	4	4	8	4	4	8	4	4
First Separate Battalion	do.....	3	3	6	3	3	6	3	3	6	3	3	6	3	3
of Infantry.	do.....	3	3	6	3	3	6	3	3	6	3	3	6	3	3
Medical Corps ¹	do.....	2	2	4	2	2	4	2	2	4	2	2	4	2	2
Total.....		12	12	24	12	12	24	12	12	24	12	12	24	12	12

¹ Not serving with troops.

Company G.....	do.....	3	.....	3	53	35	88	.....	.....	.....	13	70	.....	16	26	91	Do.
Company H.....	do.....	3	.....	3	37	26	62	.....	.....	.....	13	64	.....	16	35	65	Do.
Company I.....	do.....	3	.....	3	59	5	64	.....	.....	.....	13	68	.....	13	28	67	Do.
Company K.....	do.....	3	.....	3	60	3	63	.....	.....	.....	13	74	.....	20	41	66	
Company L.....	do.....	2	.....	2	52	20	72	.....	.....	.....	13	59	.....	16	35	74	
Company M.....	do.....	3	.....	3	61	11	72	.....	.....	.....	13	74	.....	11	36	75	
Total.....	.....	50	.....	50	748	225	973	.....	.....	.....	.....	918	.....	.....	467	1,021	
First Separate Battalion of Infantry:																	
Headquarters.....	Washington.....	4	.....	4	1	.....	1	.....	.....	.....	13	4	.....	48	4	.....
Company A.....	do.....	2	.....	2	91	1	92	.....	.....	.....	13	76	.....	47	54	.....
Company B.....	do.....	2	.....	2	77	3	80	.....	.....	.....	13	73	.....	49	54	15	
Company C.....	do.....	2	.....	2	73	9	82	.....	.....	.....	13	67	.....	48	(*)	9	
Company D.....	do.....	2	.....	2	92	6	98	.....	.....	.....	13	65	.....	53	45	40	
Total.....	.....	12	.....	12	334	19	353	.....	.....	.....	.....	285	.....	.....	157	64	
Aggregate inspected and recognized.	.....	94	.....	94	1,388	353	1,741	.....	.....	54	.....	1,466	.....	.....	836	1,232	

1 Organized Oct. 5, 1915.

2 Mustered in Dec. 8, 1915.

3 No record.

TABLE 9.—Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.

FLORIDA.

Table of organization.

State of Florida
 Commander in chief: Gov. Park M. Trammell. Ad-
 C. R. Foster, address, St. Augustine. Inspector-
 George M. Holley, Infantry; Medical Corps—Lieut. Col.
 Henry Page, Medical Corps.

Infantry: First and Second Infantry.
 Sanitary troops: 2 detachments.

Organization.	Station.	Strength at inspection.				Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).								Action taken by Division of Militia Affairs as result of inspection.	
		Officers.			Enlisted men.			Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.			Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).
		Present.	Absent.	Total.	Present.	Absent.	Total.	Number.	Average actual attendance.	Number.	Average actual attendance.	Number.	Average actual attendance.		
Adjutant General's Department.	St. Augustine.	2	2	4	2	2	4								
Quartermaster Corps.	do.	1	2	3	2		2								
Ordnance Department.	do.	1	1	2											
Medical Department: Detachments—															
First Infantry.	Milton.	3		3	14		14		8	16	25	13	15		
Second Infantry.	St. Petersburg.	3		3	7	1	8		10	13	52	8	3		
Total.		6		6	21	1	22			34		21	18		
First Infantry:															
Field officers, etc.	Apalachicola.	4		4									4		
Headquarters company.	Jacksonville.	3		3	3	1	4		8	20	74	16	1		
Band section.	do.				20	2	22								
Machine-gun company.	do.	1		1											
Supply company.	do.	3		3	1		1						5		
Company A.	do.	2		2	45	6	51		8	45	55	20	24		

Company B.....	do.....	3	.....	3	34	12	46	.....	8	48	63	29	22	Placed on probation.
Company C.....	Blountstown.....	3	.....	3	64	4	68	.....	.....	.....	9	50	71	Do.
Company D.....	Jacksonville.....	2	.....	2	29	30	59	.....	8	45	(1)	(1)	(1)	Do.
Company E.....	do.....	2	.....	2	35	18	53	.....	8	40	51	25	27	
Company F.....	do.....	3	.....	3	64	1	65	.....	8	61	54	41	16	
Company G.....	St. Augustine.....	3	.....	3	50	9	59	.....	8	45	49	36	57	Do.
Company H.....	Chipley.....	2	.....	2	60	5	65	.....	.....	.....	(1)	(1)	(1)	Do.
Company I.....	Tallahassee.....	2	.....	2	35	32	67	.....	8	41	53	33	25	Recognition with-
														drawn.
Company K.....	De Funak Springs.....	2	.....	2	56	14	70	.....	8	(1)	43	35	40	Placed on probation.
Company L.....	Apalachicola.....	2	.....	2	40	11	51	.....	8	(1)	(1)	(1)	.....	Do.
Company M.....	Panama City.....	3	.....	3	36	31	67	.....	8	(1)	44	33	37	Do.
Total.....		40	.....	40	572	176	748	.....	.....	358	.....	328	329	
Second Infantry:														
Field officers, etc.....	Wauchula.....	6	1	7	.....	.....	.....	.....	.....	.....	.....	.....	6	
Headquarters company.....	Gainesville.....	2	1	3	.....	.....	6	.....	8	38	73	20	14	
Band section.....	do.....	.....	.....	.....	20	3	23	.....	.....	.....	.....	.....	.....
Machine-gun company.....	do.....	1	.....	1	.....	.....	.....	.....	8	7	.....	.....	6	
Supply company.....	do.....	3	.....	3	2	.....	2	.....	8	67	47	(1)	38	Do.
Company A.....	Ocala.....	3	.....	3	48	25	73	.....	8	(1)	42	27	27	Recognition with-
Company B.....	Brooksville.....	2	.....	2	27	22	49	.....	(1)	.....	.....	.....	.....	drawn.
														Do.
Company C.....	Orlando.....	1	.....	1	49	24	73	.....	8	56	(1)	(1)	.....
Company D.....	Lakeland.....	3	.....	3	47	9	56	.....	8	60	47	48	16	
Company E (vacant).....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Company F.....	Wauchula.....	3	.....	3	46	20	66	.....	8	65	53	32	39	Placed on probation.
Company G.....	St. Petersburg.....	1	.....	1	18	17	35	.....	8	(1)	(1)	(1)	.....
Company H.....	Tampa.....	3	.....	3	48	4	52	.....	8	54	49	37	19	
Company I.....	Key West.....	3	.....	3	41	14	55	.....	8	59	54	57	4	
Company K.....	Arcadia.....	1	.....	1	28	16	44	.....	8	57	(1)	(1)	.....	Recognition with-
														drawn.
Company L.....	West Palm Beach.....	3	.....	3	46	11	57	.....	8	55	49	39	18	Placed on probation.
Company M.....	Miami.....	2	.....	2	39	12	51	.....	8	58	68	30	.....	Do.
Total.....		37	2	39	465	177	642	.....	.....	576	.....	290	187	
Aggregate inspected.....		87	4	91	1,080	354	1,414	.....	.....	968	.....	639	534	
Aggregate recognized.....		81	4	85	921	260	1,181	.....	.....	.....	.....	.....	.....

1 No record.

TABLE 9.—Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.

GEORGIA.

Table of organization.

Nat E. Harris, Adjutant
Militia. Inspector-instructors:
Field Artillery—Capt Charles
James A. Wheeler, Coast
Medical Corps.

4, Second, and Fifth Infantry.

Companies, inclusive,
4 detachments.

Organization.	Station.	Strength at inspection.				Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).						Action taken by Division of Militia Affairs as result of inspection.		
		Officers.		Enlisted men.		Total.	Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.		Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).	
		Present.	Absent.	Total.	Present.		Absent.	Number.	Average actual attendance.	Number.	Average actual attendance.			Number.	Average actual attendance.
General officers of the line.	Macom.	1												
Adjutant General's Department.	Atlanta.	1												
Adjutant General's Department.	do.		1											
Adjutant General's Department.	do.													
	do.	5		3	4									
	do.	2		2										
	do.													
Medical Department.	Atlanta.	5	1	6	21	17	48		10	33				
Field Hospital No. 1.	Winder.	1		1	6		6	8				40	8	2
Detachment—	Savannah.	1		1	3	4	7		10	7		45	4	4
Second Squadron Cavalry.	Atlanta.	4		4	11		11	11				36	3	3
Battalion Field Artillery.														
Fifth Infantry.														

[illegible]

Not serving with troops.

*** Mounted.**

Discontinued

**Placed on probation,
Do.**

													Do.	
Signal Corps:	Denver	3	3	18	11	20					60	18	8	
Company A.....	Trinidad.....	1	1	17	1	14					11	11	19	
Detachment Company A.....														
Total.....		4	4	35	12	47						29	27	
Cavalry:														
First Squadron —														
Headquarters.....	Denver.....	2	2											
Troop A (vacant).....														
Troop B.....	Denver.....	2	2	32	6	38	(2)	(2)	(2)	17	11	38		
Troop C.....	do.....	2	1	26	8	34	(2)	(2)	(2)	17	14	20		
Troop D.....	Boulder.....	2	2	56	1	57	(2)	(2)	(2)	34	13	53		
Total.....		8	1	114	15	129	(2)	(2)	(2)	37	23	111		
Field Artillery:														
Battery A.....	Fort Collins.....	1	1	89	8	97				24	85			
Battery B.....	Denver.....	3	3	71	22	93		6	21	45	26	71		
Total.....		4	4	160	30	190			21		110	71		
First Infantry:														
Headquarters.....	Denver.....	3	3	1		1								
Headquarters.....	do.....	2	1	1		1							4	
Company B.....	do.....	2	1	20	15	35				59	17	28		
Company G.....	do.....	2	2	43	9	52	3	12		52	14	33		
Company I.....	Fort Morgan.....	2	2	18	6	24				52	19	6		
Company K (vacant).....														
Company L.....	Denver.....	1	1	39	14	53				51	12	25		
Company M (vacant).....														
Total.....		12	2	122	44	166		12			62	96		
Second Infantry:														
Headquarters.....	Delta.....	2	1	1		1								
Headquarters.....	Lamar.....	2	1		1	1							4	
Company C.....	do.....	1	1	39	49	88			5	19	12	14		
Not serving with troops.													Dismounted.	
													Mounted	

1 Dismounted.

1 Mounted

1 Not serving with troops.

TABLE 9.—Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.

HAWAII.

Territorial designation: National Guard of Hawaii.
 Territorial headquarters: Honolulu. Commander in chief: Gov. Lucius A. Pinkham.
 Adjutant General: Col. John W. Jones; address, Honolulu. Inspector-Instructors:
 Infantry—Capt. Charles S. Lincoln, Infantry; First Lieut. Charles H. Barnstedt,
 First Infantry.

Table of organization.

Infantry: First Infantry; 13 separate companies.
 Sanitary troops: 1 detachment.

Organization.	Station.	Strength at inspection.				Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).								Action taken by Division of Militia Affairs as result of inspection.	
		Officers.		Enlisted men.		Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assembles for drill and instruction.		Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).			
		Present.	Absent.	Total.	Present.	Absent.	Total.	Number.	Average actual attendance.	Number.	Average actual attendance.		Number.		Average actual attendance.
Adjutant General's Department.	Honolulu.	2		2											
Inspector General's Department	do.	1		1											
ral's Department.	do.	1		1											
	do.	4		4	1		1								
	do.	1		1											
Medical Department:															
Detachment First Infantry	do.	2	1	3	18	3	21					54	11	20	
Medical Corps		1		1											
Total		3	1	4	18	3	21					54	11	20	
First Infantry:															
Field officers, etc.	Honolulu.	6		6											
Headquarters company.	do.	6		6	5	1	6								
Band section.	do.				23	5	28					30	15	3	
Machine-gun company	do.	1		1											

Supply company	do	1	1	1	52	21	73	2	28	44	22	18	Placed on probation.
Company A	do	2	1	2	61	15	76	2	28	44	22	36	Do.
Company B	do	2	1	3	50	52	102	2	28	(2)	(2)	(2)	Do.
Company C	do	3	2	3	64	8	72	2	28	38	24	51	Do.
Company D	do	2	2	3	78	5	83	2	28	49	22	42	Do.
Company E	do	3	3	3	58	18	76	2	28	51	29	31	Do.
Company F	do	3	3	3	59	16	75	2	28	41	31	32	Do.
Company G	do	3	3	2	72	8	80	2	28	41	44	11	Do.
Company H	do	2	3	3	106	5	111	2	28	39	80	69	Do.
Company I	do	3	3	3	62	4	66	2	28	12	34	(2)	Do.
Company K	do	3	3	3	67	22	89	2	28	(2)	(2)	(2)	Do.
Company L	do	3	3	3	140	2	142	2	28	31	56	10	Do.
Company M	do	3	3	3	140	2	142	2	28	31	56	10	Do.
Total	do	46	1	47	897	182	1,079	110	28	386	302		
Second Infantry:													
Separate companies—													
Company A	Waialakea Mill	1	1	1	131	9	131	1	1	9	56	133	Do.
Company B	Hilo	2	1	2	85	5	94	1	1	15	45	96	Do.
Company C	Laupahoehoe	3	2	3	115	13	120	2	2	23	37	123	Do.
Company D	Hilo	2	2	2	117	13	130	1	1	63	37	6	Do.
Company E	Olaa	3	3	3	101	13	114	1	1	11	57	117	Do.
Company F	Pahoa	1	1	1	102	31	133	1	1	27	50	134	Do.
Company G	Pahala	3	3	3	86	17	103	1	1	4	61	104	Do.
Company H	Kealahou	3	3	3	81	4	85	1	1	15	57	88	Do.
Total		18	1	18	818	92	910	110	28	400	801		
Third Infantry:													
Separate companies—													
Company G	Waialuku	3	3	3	140	11	140	1	1	15	(2)	143	Do.
Company H (vacant)	Waialuku	3	3	3	92	12	103	1	1	48	(2)	1	Do.
Company I	Kahului	3	3	3	39	17	51	1	1	5	37	54	Do.
Company K	Lahaina	3	3	3	127	8	144	1	1	44	(2)	27	Do.
Company L	Pala	3	3	3	90	8	98	1	1	7	55	101	Do.
Company M		3	3	3	90	8	98	1	1	7	55	101	Do.
Total		15	2	15	488	48	536	110	28	92	326		
Aggregate inspected and recognized.		91	2	93	2,223	325	2,548	110	28	889	1,449		

1 Not serving with troops.

2 No record.

TABLE 9.—Designations and stations of the Organized Militia, number presents at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.

IDAHO.

Table of organization.

Infantry: Second Infantry.
Sanitary troops: 1 detachment.

Chief: Gov. Moses Alexander. Adjutant
address, Boise. Inspector-Instructor: Im-

Organization.	Station.	Strength at inspection.			Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).						Action taken by Division of Militia Affairs as result of inspection.			
		Officers.		Enlisted men.		Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.				
		Present.	Absent.	Total.	Present.	Absent.	Total.	Number.	Average actual attendance.	Number.		Average actual attendance.	Number.	Average actual attendance.
Department.	Boise.	1		1										Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).
Department.	do.	1		1										
Inf's De	do.		1	1										
	do.	3		3										
	do.	1		1										
Medical Department:														
Detachment, Second Infantry.	do.	4		4	16	1	17	9	17	30	13	5		
Medical Corps 1.		1		1										
Total.		5		5	16	1	17		17		13	5		
	Rathdrum.	6	1	7										
	do.	3	1	4	4	3	7							
	Seed point.				20		20	9	20	104	21	20		
	Rathdrum.	2		2										
	do.	3		3	1		1							

Company A.....	3	.....	3	60	9	69	.....	.....	.....	9	42	43	29	19	Placed on probation.
Company B.....	1	.....	2	47	18	65	.....	.....	.....	9	46	48	32	23	
Company C.....	3	.....	3	51	8	59	.....	.....	.....	9	42	38	22	40	
Company D.....	2	.....	3	74	5	79	.....	.....	.....	9	41	51	31	15	
Company E.....	3	.....	3	61	10	71	.....	.....	.....	.....	.....	6	37	74	Do.
Company F.....	3	.....	3	67	24	91	.....	.....	.....	9	40	52	32	57	Do.
Company G.....	3	.....	3	41	22	63	.....	.....	.....	9	30	40	25	34	
Company H.....	3	.....	3	62	7	69	.....	.....	.....	9	55	39	24	55	
Company I.....	3	.....	3	77	4	81	.....	.....	.....	9	40	38	34	26	
Company K.....	3	.....	3	68	4	72	.....	.....	.....	.....	.....	13	47	72	Do.
Company L.....	3	.....	3	48	28	76	.....	.....	.....	9	49	42	28	65	Do.
Company M.....	3	.....	3	38	15	53	.....	.....	.....	.....	.....	7	32	56	Do.
Total.....	47	4	51	728	156	884	.....	.....	.....	.....	414	.....	389	559	
Aggregate inspected and recognized.	57	6	63	744	157	901	.....	.....	.....	.....	431	.....	401	504	

1 Not serving with troops.

	3	1	4	17	2	19			7	19	30	13	13
Rockford.....	3	1	4	17	2	19							
Paris.....	4	1	4	10	6	16			8	18	56	13	6
Hillsboro.....	3	1	4	12	4	16			8	20	46	13	3
Galesburg.....	3	1	4	14	4	18			8	19	40	8	10
Chicago.....	4	1	4	21	4	21			8	16	45	15	6
do.....	3	1	4	12	4	16			8	18	30	17	3
do.....	2	3	5										
Total.....	42	7	49	227	25	252		26		262		221	81
Corps of Engineers.....	1		1										
Company A.....	4		4	53	6	69			12	54	67	36	58
Total.....	5		5	63	6	69				54		36	58
Signal Corps:													
Company A.....	3		3	70	6	76	4	26	8	70	48	54	27
First Cavalry:													
Field officers, etc.....	5		5						47	15	51	10	
Headquarters troop.....	9		9	6		8		120	17	29	60	10	3
Band section.....				31		21					50	29	
Troop A.....	3		3	68		68		54	17	54	45		11
Troop B.....	2		2	69		69		52	17	52	51	43	
Troop C.....	3		3	69		69		52	17	52	51	37	23
Troop D.....	3		3	69		69		52	17	52	51	35	20
Troop E.....	3		3	69		69		52	17	52	51	35	13
Troop F.....	3		3	69		69		52	17	52	51	35	35
Troop G.....	3		3	69		69		52	17	52	51	35	36
Troop H.....	3		3	69		69		52	17	52	51	35	36
Troop I.....	3		3	69		69		52	17	52	51	35	36
Troop J.....	3		3	69		69		52	17	52	51	35	36
Troop K.....	1		1	83		83		44	17	44	48	45	44
Troop L.....	3		3	66		66		26	17	26	44	25	42
Troop M.....	3		3	65		65		57	17	57	50	26	46
Total.....	48		48	803	2	805		572		575		406	376
												470	

* Commanding First and Second Brigades.

* Not serving with troops.

* Mounted.

* Dismounted.

* Includes 1 veterinarian.

TABLE 9.—Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.

ILLINOIS—Continued.

Organization.	Station.	Strength at inspection.				Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).						Action taken by Division of Militia Affairs as result of inspection.		
		Officers.		Enlisted men.		Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.			Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).	
		Present.	Absent.	Total.	Present.	Absent.	Total.	Number.	Average actual attendance.	Number.	Average actual attendance.			
Field Artillery— First Battalion— Headquarters..... Battery A..... Battery B..... Battery C..... Total.....	Waukegan..... Denville..... Chicago..... Fort Sheridan.....	2 5 5 3 15	1 1	3 5 5 3 16	15 87 85 96 293	..... 15 12 2 20	..... 103 100 100 317	..... ..... ..... ..... .....	10 7 10 10 27	23 112 108 240	24 53 53 20	10 54 51 53 183	5 44 14 55 118	
	Second Battalion— Headquarters..... Battery D..... Battery E..... Battery F..... Total.....	Chicago..... do..... do..... Champaign.....	3 2 2 4 11	..... 1 1 2 3	3 3 2 5 13	15 114 105 87 324	..... 25 17 2 44	15 139 125 89 363	..... ..... ..... ..... .....	..... ..... ..... ..... .....	..... ..... ..... ..... .....	..... 17 22 3 237	..... 79 82 78..........	.........................
	Chicago..... do..... do..... do..... do.....	7 4 2 2	..... ..... ..... ..... .....	7 4 3 3	..... 6 26 25 1	..... ..... 26 25 1	..... 27 30 1 .....	..... ..... 17 17 17	..... ..... ..... ..... .....	..... ..... ..... ..... .....	..... ..... ..... ..... .....	..... 53 61 53 .....	..... 40 14 ..... .....	..... ..... ..... 12

Recognition with-
drawn.

Company A.....	do.....	2	.....	2	40	0	46	.....	.....	17	82	.....	49	.....	41	9
Company B.....	do.....	3	.....	3	48	5	53	.....	.....	17	47	.....	49	.....	44	14
Company C.....	do.....	3	.....	3	40	.....	40	.....	.....	17	36	.....	49	.....	38	12
Company D.....	do.....	3	.....	3	42	5	47	.....	.....	17	54	.....	48	.....	44	3
Company E.....	do.....	3	.....	3	47	.....	47	.....	.....	17	63	.....	44	.....	47	6
Company F.....	do.....	3	.....	3	36	2	38	.....	.....	17	50	.....	55	.....	41	9
Company G.....	do.....	2	.....	2	41	3	44	.....	.....	17	46	.....	52	.....	36	14
Company H.....	do.....	3	.....	3	38	1	39	.....	.....	17	48	.....	44	.....	38	5
Company I.....	do.....	3	.....	3	44	4	48	.....	.....	17	51	.....	48	.....	36	13
Company K.....	do.....	1	.....	1	36	1	37	.....	.....	17	54	.....	65	.....	42	11
Company L.....	do.....	3	.....	3	37	.....	37	.....	.....	17	53	.....	48	.....	41	5
Company M.....	do.....	3	.....	3	65	1	66	.....	.....	17	55	.....	56	.....	58	9
Total.....	.....	47	.....	47	573	33	606	.....	.....	.....	677	.....	.....	.....	563	122
Second Infantry:	Chicago.....	7	.....	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Field officers, etc.....	do.....	3	1	4	6	.....	6	.....	.....	8	38	.....	.....	.....	.....	.....
Headquarters company.....	do.....	.....	.....	.....	26	1	27	.....	.....	.....	.....	.....	49	.....	27	15
Band section.....	do.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Machine-gun company.....	do.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Supply company.....	do.....	3	.....	3	2	.....	2	.....	.....	8	6	.....	49	.....	5	1
Company A.....	do.....	3	.....	3	62	5	67	.....	.....	8	65	.....	48	.....	39	9
Company B.....	do.....	3	.....	3	65	2	67	.....	.....	8	41	.....	49	.....	38	46
Company C.....	do.....	2	.....	2	61	5	66	.....	.....	8	52	.....	49	.....	31	53
Company D.....	do.....	3	.....	3	47	2	49	.....	.....	8	45	.....	48	.....	28	21
Company E.....	do.....	3	.....	3	41	3	44	.....	.....	8	44	.....	52	.....	30	19
Company F.....	do.....	2	.....	2	55	2	57	.....	.....	8	43	.....	50	.....	36	5
Company G.....	do.....	3	.....	3	49	4	53	.....	.....	8	53	.....	50	.....	40	26
Company H.....	do.....	3	.....	3	52	1	53	.....	.....	8	48	.....	50	.....	25	35
Company I.....	do.....	2	.....	2	51	1	52	.....	.....	8	55	.....	49	.....	26	32
Company K.....	do.....	3	.....	3	48	.....	48	.....	.....	8	46	.....	50	.....	37	.....
Company L.....	do.....	2	.....	2	53	1	54	.....	.....	8	54	.....	51	.....	34	.....
Company M.....	do.....	3	.....	3	56	5	61	.....	.....	8	56	.....	45	.....	34	24
Total.....	.....	46	1	47	674	32	706	.....	.....	.....	646	.....	.....	.....	435	286
Third Infantry:	Aurora.....	7	.....	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7
Field officers, etc.....	Rockford.....	4	.....	4	6	.....	6	.....	.....	8	38	.....	100	.....	.....	10
Headquarters company.....	De Kalb.....	.....	.....	.....	26	2	28	.....	.....	.....	.....	.....	.....	.....	26	.....
Band section.....	Rockford.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Machine-gun company.....	do.....	2	.....	2	2	.....	2	.....	.....	.....	7	.....	.....	.....	.....	7
Supply company.....	do.....	3	.....	3	19	.....	21	.....	.....	8	28	.....	50	.....	19	1
Company A.....	De Kalb.....	3	.....	3	33	6	39	.....	.....	8	43	.....	49	.....	28	13
Company B.....	Hoopeston.....	3	.....	3	32	1	33	.....	.....	8	34	.....	46	.....	24	4
Company C.....	Ottawa.....	3	.....	3	16	20	36	.....	20	8	31	.....	36	.....	5	30
Company D.....	Aurora.....	2	.....	2	40	.....	40	.....	.....	8	65	.....	43	.....	25	10
Company E.....	Elgin.....	3	.....	3	37	5	42	.....	30	8	45	.....	45	.....	35	7
Company F.....	Pontiac.....	3	.....	3	36	15	51	.....	(*)	8	39	.....	42	.....	35	12
Company G.....	Woodstock.....	3	.....	3	36	2	38	.....	.....	8	35	.....	47	.....	26	24
Company H.....	Rockford.....	3	.....	3	24	19	43	.....	.....	8	51	.....	47	.....	24	17
Company I.....	Aurora.....	3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Placed on probation.
Do.

Do.
Do.
Do.
Do.
Do.

1 No record.

TABLE 9.—Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.

ILLINOIS—Continued.

Organization.	Station.	Strength at inspection.			Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).						Action taken by Division of Militia Affairs as result of inspection.		
		Officers.		Enlisted men.		Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.			
		Present.	Absent.	Total.	Present.	Absent.	Total.	Number.	Average actual attendance.	Number.		Average actual attendance.	Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).
Seventh Infantry:	Chicago.	6		6									Placed on probation. Do. Do. Do. Do.
Field officers, etc.	do.	2		2	6			8	40	38	24		
Headquarters company	do.				25	3	28						
Band section	do.	1		1									
Machine-gun company	do.	3		3	2		2						
Supply company	do.	3		3	39	5	44	8	40	52	6	7	
Company A	do.	2		2	38	8	46	8	46	48	13	10	
Company B	do.	3		3	48	3	51	8	59	49	18	19	
Company C	do.	3		3	44	6	50	8	61	49	20	30	
Company D	do.	2		2	48	8	56	8	35	50	21	14	
Company E	do.	2		2	39	3	42	8	47	51	20	21	
Company F	do.	3		3	43	10	53	8	50	51	14	13	
Company G	do.	2		2	53		53	8	46	50	24	6	
Company H	do.	3		3	32	21	53	8	48	51	20	26	
Company I	do.	3		3	50	6	56	8	46	51	14	45	
Company K	do.	3		3	42	1	43	8	58	49	24	12	
Company L	do.	3		3	55		56	8	60	51	29	9	
Company M	do.												
Total		44		44	564	75	639		642		267	211	

Placed on probation.
Do.
Do.
Do.
Do.

Eighth Infantry (colored):

Field officers, etc.....	7	4	5	18	574	194	768	(1)	79	8	639	(1)	48	30	.....	.....
Headquarters company.....	4	4	22	4	18	4	5	5	.....	8	31	48	.....	.....	.....	.....
Band section.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Machine-gun company.....	2	2	2	2	2	2	2	2	2	9	7	50	7	7	.....	.....
Supply company.....	3	3	59	61	56	8	59	59	.....	8	55	49	36	36	23	.....
Company A.....	3	3	72	56	56	16	72	72	.....	8	57	38	36	36	29	.....
Company B.....	3	3	60	52	52	8	60	60	.....	8	53	43	38	38	22	.....
Company C.....	3	3	68	42	42	26	68	68	.....	8	52	48	24	24	41	.....
Company D.....	3	3	70	52	52	18	70	70	.....	8	52	51	39	39	17	.....
Company E.....	3	3	49	46	46	3	49	49	.....	8	46	51	30	30	19	.....
Company F.....	3	3	57	42	42	15	57	57	.....	8	62	32	36	36	36	.....
Company G.....	3	3	57	37	37	20	57	57	.....	8	64	30	38	38	30	.....
Company H.....	3	3	69	48	48	21	69	69	.....	8	38	30	32	32	24	.....
Company I.....	3	3	54	29	29	25	54	54	(1)	(1)	(1)	(1)	(1)	(1)	57	.....
Company K.....	3	3	62	46	46	16	62	62	1	41	67	27	41	41	.....	.....
Company L.....	3	3	62	46	46	16	62	62	1	38	55	45	41	41	.....	.....
Company M.....	3	3	62	48	48	14	62	62	.....	8	55	.....	.....	.....	.....	.....
Total.....	52	52	768	574	574	194	768	768	79	.....	639	.....	428	428	298	.....
Aggregate inspected.....	505	531	6,565	5,685	5,685	880	6,565	6,565	1,206	.....	6,171	.....	3,992	3,992	2,455	.....
Aggregate recognized.....	476	500	6,099	5,330	5,330	769	6,099	6,099	.....	.....	.....	.....	.....	.....	.....	.....

1 Organized Jan. 3, 1916.

TABLE 9.—Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.

INDIANA.

B
B

Table of organization.

First and Second Separate Battalions.

Note. Medical Corps—Maj. Ernest L. Ruffner, Medical Corps.

Sanitary troops: Ambulance Company No. 1, Field Hospital No. 1; 2 detachments.

Organization.	Station.	Strength at inspection.			Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).						Action taken by Division of Militia Affairs as result of inspection.		
		Officers.			Enlisted men.		Consecutive days on practice march.		Consecutive days in camp service for instruction.			Assemblies for drill and instruction.	Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).
		Present.	Absent.	Total.	Present.	Absent.	Total.	Number.	Average actual attendance.	Number.				Average actual attendance.
Adjutant General's Department.	Indianapolis.	1		1									
Judge Advocate General's Department.	do.	1		1									
Quartermaster Corps.	do.	4		4									
No. 1.	Frankfort.	4		4	26	8	44	5	30	11	48	50	19
	Indianapolis.	5		5	20	6	25			12	33	50	5
	Bloomington.	1	1	2	8	13	21			7	17	51	2
	Angola.	1	1	2	12	6	19			15	16	48	4
		6		6									
Total.		17	2	19	66	33	119		30		114		30
Signal Corps:													
Company A.	Indianapolis.	2		2	62	5	57	7	27	8	57	49	41

[illegible]

No record.

Not moving with troops.

TABLE 9.—*Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.*

INDIANA—Continued.

Organization.	Station.	Strength at inspection.			Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).						Action taken by Division of Militia Affairs as result of inspection.		
		Officers.		Enlisted men.		Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.		Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).	
		Present.	Absent.	Total.	Present.	Absent.	Total.	Number.	Average actual attendance.	Number.			Average actual attendance.
First Separate Battalion of Infantry:	Indianapolis.....	4	27	29	27	2	29	8	29	50	27	1	Placed on probation. Do.
Headquarters.....	do.....	3	44	64	44	20	64	8	53	51	31	25	
Company A.....	do.....	2	48	54	48	6	54	8	55	51	23	16	
Company C.....	do.....	2	54	56	54	2	56	8	57	51	51	27	
Company D.....	do.....	2	33	41	33	8	41	8	46	50	22	61	
Company K.....	Martinsville.....	2											
Total.....		13	206	244	206	38	244		246		154	130	Do.
Second Separate Battalion of Infantry:	Fort Wayne.....	2	62	63	62	1	63	8	62	30	63	16	
Headquarters.....	Laporte.....	3	47	65	47	18	65	8	57	25	43	54	
Company B.....	Gary.....	2	63	69	63	6	69	8	63	23	57		
Company F.....	Michigan City.....	3	57	63	57	6	63			23	48		
Company G.....	Knox.....	2											
Company H.....													Do.
Total.....		12	219	250	219	31	250		182		201	70	
First Separate Company of Infantry.	Fort Wayne.....	2	43	56	43	8	56	8	45	52	37	18	
Aggregate inspected.....		145	2,043	2,531	2,043	483	2,531		2,342		1,454	980	
Aggregate recognized.....		142	1,978	2,411	1,978	433	2,411						

IOWA.

State designation: Iowa National Guard.
 State headquarters: Des Moines. Commander in chief: Gov. George W. Clarke. Adjutant General: Brig. Gen. Guy E. Logan; address, Des Moines. Inspector-instructors: Infantry—Capt. Edgar Ridenour, Infantry; Field Artillery—First Lieut. Louis R. Dougherty, Field Artillery; Medical Corps—Maj. James M. Phelan, Medical Corps.

Table of organization.

(a) First, Second, and Third Infantry of Infantry.

Sanitary troops: Ambulance Company No. 1; Field Hospital No. 1; 4 detachments.

Organization.	Station.	Strength at inspection.			Instruction during year ended Dec. 31, 1915 (sec. 15, militia law).						Action taken by Division of Militia Affairs as result of inspection.			
		Officers.		Enlisted men.		Consecutive days on practice march.	Consecutive days in camp service for instruction.		Assemblies for drill and instruction.			Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).		
		Present.	Absent.	Total.	Present.		Absent.	Total.	Number.	Average actual attendance.			Number.	Average actual attendance.
		1	1	2	1	1	2	1	1	2	1	1	2	
		1	1	2	1	1	2	1	1	2	1	1	2	
		1	1	2	1	1	2	1	1	2	1	1	2	
		1	1	2	1	1	2	1	1	2	1	1	2	
		1	1	2	1	1	2	1	1	2	1	1	2	
		1	1	2	1	1	2	1	1	2	1	1	2	
		1	1	2	1	1	2	1	1	2	1	1	2	
		1	1	2	1	1	2	1	1	2	1	1	2	
		1	1	2	1	1	2	1	1	2	1	1	2	
		1	1	2	1	1	2	1	1	2	1	1	2	
		1	1	2	1	1	2	1	1	2	1	1	2	
		1	1	2	1	1	2	1	1	2	1	1	2	
		1	1	2	1	1	2	1	1	2	1	1	2	
		1	1	2	1	1	2	1	1	2	1	1	2	
		1	1	2	1	1	2	1	1	2	1	1	2	
		1	1	2	1	1	2	1	1	2	1	1	2	
		1	1	2	1	1	2	1	1	2	1	1	2	
		1	1	2	1	1	2	1	1	2	1	1	2	
		1	1	2	1	1	2	1	1	2	1	1	2	
		1	1	2	1	1	2	1	1	2	1	1	2	
		1	1	2	1	1	2	1	1	2	1	1	2	
		1	1	2	1	1	2	1	1	2	1	1	2	
		1	1	2	1	1	2	1	1	2	1	1	2	
		1	1	2	1	1	2	1	1	2	1	1	2	
		1	1	2	1	1	2	1	1	2	1	1	2	
		1	1	2	1	1	2	1	1	2	1	1	2	
		1	1	2	1	1	2	1	1	2	1	1	2	
		1	1	2	1	1	2	1	1	2	1	1	2	
		1	1	2	1	1	2	1	1	2	1	1	2	
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		1	1	2	1	1	2	1	1	2	1	1	2	
		1	1	2	1	1	2	1	1	2	1	1	2	</

1 No record.

2 Net serving with troops.

TABLE 9.—Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.

IOWA—Continued.

Organization.	Station.	Strength at inspection.			Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).						Action taken by Division of Militia Affairs as result of inspection.				
		Officers.		Enlisted men.		Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.		Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).			
		Present.	Absent.	Total.	Present.	Absent.	Total.	Number.	Average actual attendance.	Number.			Average actual attendance.		
Corps of Engineers: Company A.....	Iowa City.....	4	4	63	3	66	10	61	50	77	31	
Cavalry: First Squadron— Headquarters.....	do.....	4	.....	4	1	.....	1	.....	.....	12	128	(1)	(1)	.....
Band.....	Ottumwa.....	.....	.....	.....	24	4	28	(1)	(2)	38	28	150	22	.....
Troop A.....	North English...	2	.....	2	62	2	64	168	(2)	110	68	112	60	1
Troop B— First Platoon.....	Riverside.....	1	.....	1	36	.....	36	134	(2)	110	34	112	27	27
Second Platoon.....	Lone Tree.....	2	.....	2	29	.....	29	130	(2)	110	30	120	28	32
Troop C— First Platoon.....	Oxford.....	3	.....	3	68	1	69	168	(2)	110	68	129	46	.....
Second Platoon.....	Williamsburg...	.....	.....	.....	.....	.....	.....	(2)	(2)	(1)	(2)	20	46	.....
Troop D.....	West Branch...	3	.....	3	61	1	62	160	(2)	110	60	19	62	4
Total.....	.....	15	.....	15	281	8	284	1260	(2)	.....	1283	.....	1213	64

Field Artillery— First Battalion—		3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000	1001	1002	1003	1004	1005	1006	1007	1008	1009	1010	1011	1012	1013	1014	1015	1016	1017	1018	1019	1020	1021	1022	1023	1024	1025	1026	1027	1028	1029	1030	1031	1032	1033	1034	1035	1036	1037	1038	1039	1040	1041	1042	1043	1044	1045	1046	1047	1048	1049	1050	1051	1052	1053	1054	1055	1056	1057	1058	1059	1060	1061	1062	1063	1064	1065	1066	1067	1068	1069	1070	1071	1072	1073	1074	1075	1076	1077	1078	1079	1080	1081	1082	1083	1084	1085	1086	1087	1088	1089	1090	1091	1092	1093	1094	1095	1096	1097	1098	1099	1100	1101	1102	1103	1104	1105	1106	1107	1108	1109	1110	1111	1112	1113	1114	1115	1116	1117	1118	1119	1120	1121	1122	1123	1124	1125	1126	1127	1128	1129	1130	1131	1132	1133	1134	1135	1136	1137	1138	1139	1140	1141	1142	1143	1144	1145	1146	1147	1148	1149	1150	1151	1152	1153	1154	1155	1156	1157	1158	1159	1160	1161	1162	1163	1164	1165	1166	1167	1168	1169	1170	1171	1172	1173	1174	1175	1176	1177	1178	1179	1180	1181	1182	1183	1184	1185	1186	1187	1188	1189	1190	1191	1192	1193	1194	1195	1196	1197	1198	1199	1200	1201	1202	1203	1204	1205	1206	1207	1208	1209	1210	1211	1212	1213	1214	1215	1216	1217	1218	1219	1220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TABLE 9.—Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.

IOWA—Continued.

Organisation.	Station.	Strength at inspection.			Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).				Action taken by Division of Militia Affairs as result of inspection.	
		Officers.		Enlisted men.	Consecutive days on practice march.		Consecutive days in camp service for instruction.			
		Present.	Absent.		Number.	Average actual attendance.	Number.	Average actual attendance.		
Third Infantry:	Des Moines.	7		5						
Field officers, etc.	Clarinda.	4		28			75	25		
Headquarters company.	do.			46			23	30	1	
Band section.	do.	2		2						
Machine-gun company.	Des Moines.	3		43			47	30	18	
Supply company.	Winterset.	3		55			50	27	4	
Company A.	Des Moines.	3		42			49	33	15	
Company B.	Ames.	3		57			50	41	5	
Company C.	Centerville.	3		23			49	29	16	
Company D.	Shenandoah.	3		65			51	44	11	
Company E.	Villisca.	3		60			50	45	7	
Company F.	Ottumwa.	3		57			50	51	3	
Company G.	Oskaloosa.	2		49			52	45	7	
Company H.	Glenwood.	3		45			45	42	18	
Company I.	Corning.	2		56			50	31	28	
Company K.	Council Bluffs.	2	1	66			50	39	13	
Company L.	Red Oak.	3		66						
Company M.										
Total.		45	1	703				512	146	
First Separate Company of Infantry.	Grinnell.	3		48			49	41	8	
Aggregate inspected.		213	8	2,992						
Aggregate recognized.		210	8	2,942		260		2,228	626	

KANSAS.

State designation: Kansas National Guard.

State headquarters: Topeka. Commander in chief: Gov. Arthur Capper. Adjutant

General: Brig. Gen. Charles I. Martin, address, Topeka. Inspector-Instructor:

Infantry—None; Field Artillery—Capt. Waldo C. Potter, Field Artillery.

Table of organization.

Infantry, First Separate Company.

B.

Organization.	Station.	Strength at inspection.				Instruction during year ended Dec. 31, 1915 (sec. 15, militia law).						Action taken by Division of Militia Affairs as result of inspection.		
		Officers.		Enlisted men.		Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.			Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).	
		Present.	Absent.	Total.	Present.	Absent.	Total.	Number.	Average actual attendance.	Number.	Average actual attendance.			
Topoka.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
do.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
do.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
do.....	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
do.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Medical Department:	Lawrence.....	1	.....	1	40	1	41	.....	.....	10	26	45	25	14
Detachment Hospital Corps.....	.....	4	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Medical Corps 1.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	.....	5	.....	5	40	1	41	.....	.....	.....	35	.....	25	14
Signal Corps:	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Company A.....	Topeka.....	3	.....	3	73	16	89	.....	.....	.....	.....	24	50	.....
Field Artillery:	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Battery A.....	Topeka.....	5	.....	5	82	30	112	.....	.....	10	108	50	37	68

1 Not serving with troops.

TABLE 9.—Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.

KANSAS—Continued.

Organization.	Station.	Strength at inspection.			Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).						Action taken by Division of Militia Affairs as result of inspection.		
		Officers.		Enlisted men.		Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.			
		Present.	Absent.	Total.	Present.	Absent.	Total.	Number.	Average actual attendance.	Number.		Average actual attendance.	Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).
First Infantry:													
Field officers, etc.	Lawrence.	7		7	11	2	13					7	Placed on probation.
Headquarters company.	do.	4		4	24	5	29	10	39	79	20	18	
Band section.	do.												Do.
Machine-gun company.	do.	1		1	5	7	12	10	16			16	
Supply company.	do.	3		3	34	24	58	10	50	48	14	53	Do.
Company A.	Belleville.	3		3	45	9	54	10	49	59	30	21	
Company B.	Horton.	3		3	60	9	69	10	63	46	29	43	Do.
Company C.	Burlington.	3		3	36	20	56	10	50	47	23	20	
Company D.	Paola.	3		3	34	7	41	10	47	53	24	20	Do.
Company E.	Fredonia.	3		3	44	12	56	10	47	51	30	27	
Company F.	Hiawatha.	3		3	39	20	59	10	49	51	24	46	Do.
Company G.	Fort Scott.	3		3	58	7	65	10	60	63	28	26	
Company H.	Lawrence.	3		3	47	5	52	10	41	63	22	45	Do.
Company I.	Manhattan.	3		3	45	18	63	10	42	52	21	37	
Company K.	Garnett.	3		3	41	29	70	10	5	50	24	35	Placed on probation.
Company L.	Yates Center.	3		3	56		56	10	41	43	33		
Company M.	Lawrence.												
Total.		51		51	579	174	753		599		322	437	

[illegible]

No record.

and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Inspection—Continued.

KENTUCKY.

National Guard.
 t. Commander in chief: Gov. A. O. Stanley. Adjutant
 y Ellis, address, Frankfort. Inspector-instructors: Infan-
 m, Nineteenth Infantry; Medical Corps—Maj. Ernest L.

Table of organization.

First Brigade (headquarters, Lexington): First, Second, and Third Infantry.
 Unattached:
 Sanitary troops: Field Hospital No. 1; 3 detachments.

Organization.	Station.	Strength at inspection.				Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).								Action taken by Division of Militia Affairs as result of inspection.
		Officers.		Enlisted men.		Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assembles for drill and instruction.		Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).		
		Present.	Absent.	Total.	Present.	Absent.	Total.	Number.	Average actual attendance.	Number.	Average actual attendance.			
General officers of the line.....	Lexington.....	1	1	
Adjutant General's Department.....	Frankfort.....	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Inspector General's Department.....	do.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Quartermaster Corps.....	do.....	3	.....	3	1	.....	1	.....	.....	.....	.....	.....	.....
Ordinance Department.....	do.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Medical Department: Field Hospital No. 1.....	Louisville.....	4	.....	4	20	13	43	.....	9	33	26	19	15
Detachments— First Infantry.....	do.....	4	.....	4	16	.....	16	.....	9	16	51	16	6
Second Infantry.....	Reattsville.....	2	1	3	11	3	16	.....	12	16	40	9	3
Third Infantry.....	Earlington.....	4	.....	4	12	3	16	.....	10	20	51	11	3
Total.....	.....	14	1	15	69	21	90	.....	.....	55	.....	56	27

Placed on probation.													
First Infantry:	Field officers, etc.												
	Headquarters company.	6	1	7	6	14	2	8		43	25		8
	Band section.	4		4	30								
	Machine-gun company.	1	1	2	2	1	2	7					
	Supply company.	2	1	3	53	3	4	37					
	Company A.	3		3	58	5	2	58					59
	Company B.	3		3	58	14	2	60					1
	Company C.	3		3	52	6	2	53					30
	Company D.	3		3	70		2	51					17
	Company E.	3		3	53	18	2	(1)					34
	Company F.	2	1	3	66	28	2	59					28
	Company G.	3		3	53	13	2	(1)					50
	Company H.	2		2	39	18	2						9
	Company I.	1	2	3	45	9	2						(1)
	Company K.	2		2	46	15	2	43					
	Company L.	3		3	54	17	2	57					11
	Company M.	2	1	3									33
Total.		43	7	50	685	161		486			353		280
Second Infantry:	Field officers, etc.												
	Headquarters company.	5	2	7									
	Band section.	4		4	6	2							4
	Machine-gun company.	1	1	2	27	1							
	Supply company.	3		3	2		2	7					
	Company A.	2	1	3	63	17	3	52					42
	Company B.	3		3	72	25	2	53					19
	Company C.	3		3	69	11	2	67					71
	Company D.	3		3	41	9	2	69					11
	Company E.	3		3	72	16	2	52					
	Company F.	2	1	3	48	6	2	57					20
	Company G.	2	1	3	70	50	2	55					16
	Company H.	2	1	3	63	33	2	62					55
	Company I.	3		3	56	12	2	56					4
	Company K.	3		3	71	18	2	63					27
	Company L.	2	1	3	58	13	2	(1)					41
	Company M.	1	2	3	73	37	2	49					17
Total.		42	10	52	791	251		642			391		327
Third Infantry:	Field officers, etc.												
	Headquarters company.	7		7									
	Band section.	4		4	6	8	2	8					19
	Machine-gun company.	1	1	2	27								
	Supply company.	2	1	3	1		2	7					
	Company A.	3		3	65	20	2	52					31
	Company B.	3		3	68	20	3	48					14

No record.

TABLE 9.—Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.

KENTUCKY—Continued.

Organization.	Station.	Strength at inspection.			Instruction during year ended Dec. 31, 1915 (sec. 18, militia law)								Action taken by Division of Militia Affairs as result of inspection.		
		Officers.		Enlisted men.		Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.		Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).			
		Present.	Absent.	Total.	Present.	Absent.	Total.	Number.	Average actual attendance.	Number.	Average actual attendance.				
Third Infantry—Continued.	Livermore.....	2	1	3	34	29	63	2	46	7	49	37	29	40	Placed on probation.
Company C.....	Hopkinsville.....	3	.....	3	66	4	70	2	72	7	72	(1)	(1)	4	
Company D.....	Madisonville.....	3	.....	3	56	10	66	5	43	7	72	50	29	19	Do.
Company E.....	Providence.....	3	.....	3	36	19	55	.....	.....	.....	.....	.....	.....	.....
Company F.....	Earlington.....	3	.....	3	55	9	64	2	52	7	59	41	36	11	Do.
Company G.....	Hartford.....	2	.....	2	38	38	76	2	60	7	65	39	32	21	
Company H.....	Leitchfield.....	2	1	3	30	43	73	2	53	7	55	54	45	14	Do.
Company I.....	Owensboro.....	2	1	3	23	28	51	2	(1)	7	(1)	(1)	(1)	4	
Company K.....	Murray.....	2	1	3	24	17	41	2	(1)	7	43	(1)	(1)	2	Recognition withdrawn.
Company L.....	Calhoun.....	2	.....	2	33	23	56	2	(1)	7	(1)	37	29	32	
Company M.....	.....	44	6	50	514	268	782	.....	441	.....	561	.....	265	211	
Total.....	.....	151	24	175	1,648	701	2,349	.....	1,569	.....	2,006	.....	1,064	845	
Aggregate inspected.....	.....	147	23	170	1,591	661	2,252	.....	.....	.....	.....	.....	.....	.....
Aggregate recognized.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

1 No record.

LOUISIANA.

Table of organization.

In chief: Gov. Rufin G. Pleasant.
 address, Baton Rouge. Inspector-
 s, Fourth Infantry: Cavalry Capt.
 apt. Charles E. Blakely, Fifth Field

Infantry: First Infantry.
 Cavalry: Second Separate Troop.
 Field Artillery: Battalion Washington Artillery.
 Sanitary troops: 1 detachment.

ARTILLERY.

Organization.	Station.	Strength at inspection.			Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).						Action taken by Division of Militia Affairs as result of inspection.		
		Officers.		Enlisted men.		Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assembles for drill and instruction.		Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).	
		Present.	Absent.	Total.	Present.	Absent.	Total.	Number.	Average actual attendance.	Number.			Average actual attendance.
Medical Department: Detachment Hospital Corps. Medical Corps¹.	Baton Rouge.....	1	1	1	1								
	do.....	1	1	1	1								
	do.....	1	1	1	1								
	do.....	2	1	3	1	1	2						
	do.....	1	1	1	1								
Total.....	New Orleans.....	3	3	3	30	5	35	15	20	47	20	15	
	do.....	2	2	2									
	do.....	5	5	5	30	5	35		20		20	15	
Cavalry: Second Separate Troop.....	do.....	2	2	2	32	16	48	(2) (3)	(2) (3)	10 (3)	42 (3)	18 (3)	23
	do.....												
Total.....													
Total.....													

¹ Mounted.
² Dismounted.
³ Not serving with troops.

¹ Not serving with troops.

² Mounted.

³ Dismounted.

TABLE 9.—Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.

LOUISIANA—Continued.

Organization.	Station.	Strength at inspection.			Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).				Placed on probation.	Do.
		Officers.			Consecutive days on practice march.	Consecutive days in camp service for instruction.	Assemblies for drill and instruction.	Action taken by Division of Militia Affairs as result of inspection.		
		Present.	Absent.	Total.						
Field Artillery: Battalion Washington Artillery—	New Orleans.....	3	3	6	2	21	25	1	20	70
	Headquarters.....	3	3	6	2	21	25	1	20	70
	Battery A.....	3	3	6	2	21	25	1	20	70
	Battery B.....	3	3	6	2	21	25	1	20	70
	Battery C.....	3	3	6	2	21	25	1	20	70
Total.....		15	15	30	10	105	125	5	200	700
First Infantry: Field officers, etc. Headquarters company	Monroe.....	4	1	5	2	21	25	1	20	70
	Baton Rouge.....	4	1	5	2	21	25	1	20	70
	do.....	4	1	5	2	21	25	1	20	70
	Ruston.....	4	1	5	2	21	25	1	20	70
	do.....	4	1	5	2	21	25	1	20	70
	Crowley.....	4	1	5	2	21	25	1	20	70
	De Ridder.....	4	1	5	2	21	25	1	20	70
	Monroe.....	4	1	5	2	21	25	1	20	70
	Baton Rouge.....	4	1	5	2	21	25	1	20	70
	Ruston.....	4	1	5	2	21	25	1	20	70
	Hopkins.....	4	1	5	2	21	25	1	20	70
	Baton Rouge.....	4	1	5	2	21	25	1	20	70
Total.....		40	10	50	20	210	250	10	200	700

Company I.....	3	.....	3	60	30	90	.....	.....	.....	15	68	51	36	59	Do.
Company K.....	2	1	3	42	27	69	.....	.....	.....	15	48	52	31	47	Do.
Company L.....	2	.....	2	28	22	50	.....	.....	.....	14	42	51	22	51	Do.
Company M.....	3	.....	3	47	9	56	.....	.....	.....	15	46	36	15	45	Do.
Total.....	35	6	41	528	281	809	.....	38	.....	.....	502	.....	269	606	
Aggregate inspected and recognized.	56	7	63	797	322	1,119	.....	59	.....	.....	564	.....	363	713	

1 No record.

TABLE 9.—Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.

MAINE.

Table of organization.

Infantry: Second Infantry.
Coast Artillery Corps: First to Thirtieth Companies, inclusive.
Sanitary troops: 2 detachments.

Organization.	Station.	Strength at inspection.				Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).								Action taken by Division of Militia Affairs as result of inspection.
		Officers.		Enlisted men.		Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.		Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).		
		Present.	Absent.	Total.	Present.	Absent.	Total.	Number.	Average actual attendance.	Number.	Average actual attendance.			
Augusta.....	1	1	1	1	1	1	1	1	1	1	1	1	Placed on probation.	
do.....	1	1	1	1	1	1	1	1	1	1	1	1		
do.....	1	1	1	1	1	1	1	1	1	1	1	1		
do.....	1	1	1	1	1	1	1	1	1	1	1	1		
Norway.....	4	1	4	8	8	16	10	20	26	12	19	Placed on probation.		
Waterville.....	3	1	4	13	8	20	10	23	26	(1)	2			
Medical Corps ¹	3		3											
Total.....	10	1	11	20	16	36		42		12	21			

Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).

Placed on probation.

Coast Artillery Corps:	Headquarters.....	13	.....	13	7	.....	26	7	.....	.....	.....	10	48	53	22	.....	3
	Band.....	.....	.....	.....	24	2	40	.....	.....	.....	.....	10	51	47	20	.....	19
	First Company.....	3	.....	3	28	12	45	.....	.....	.....	.....	10	47	40	21	.....	33
	Second Company.....	2	.....	2	37	8	50	.....	.....	.....	.....	10	50	52	22	.....	29
	Third Company.....	2	.....	2	40	10	42	.....	.....	.....	.....	10	50	60	24	.....	19
	Fourth Company.....	3	.....	3	34	8	41	.....	.....	.....	.....	10	44	49	26	.....	2
	Fifth Company.....	2	.....	2	34	7	39	.....	.....	.....	.....	10	53	51	26	.....	23
	Sixth Company.....	3	.....	3	31	8	49	.....	.....	.....	.....	10	50	51	34	.....	23
	Seventh Company.....	2	.....	2	44	5	46	.....	.....	.....	.....	10	51	54	28	.....	35
	Eighth Company.....	3	.....	3	40	6	36	.....	.....	.....	.....	10	49	53	18	.....	21
	Ninth Company.....	3	.....	3	26	10	47	.....	.....	.....	.....	10	47	54	21	.....	27
	Tenth Company.....	1	2	3	25	22	43	.....	.....	.....	.....	10	.....	46	27	.....	13
	Eleventh Company.....	3	.....	3	32	11	47	.....	.....	.....	.....	10	58	51	37	.....	18
	Twelfth Company.....	3	.....	3	46	1	66	.....	.....	.....	.....	10	6	25	51	.....	61
	Thirteenth Company.....	3	.....	3	61	5	.....	.....	.....	.....	.....	10	.....	25	51	.....	61
Total.....		46	2	48	509	115	624	.....	.....	.....	.....	.....	604	.....	377	326	.....
Second Infantry:	Field officers, etc.....	7	.....	7	.....	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Headquarters company.....	4	.....	4	.....	7	29	.....	.....	.....	.....	10	39	48	20	.....	5
	Band section.....	.....	1	.....	22	2	45	.....	.....	.....	.....	10	50	34	41	.....	28
	Machine-gun company.....	1	.....	2	43	.....	2	.....	.....	.....	.....	10	5	.....	.....	.....	.....
	Supply company.....	3	.....	3	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Company A (vacant).....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Company B.....	3	.....	3	51	12	63	2	30	.....	.....	10	60	64	32	.....	18
	Company C.....	3	.....	3	38	21	59	.....	.....	.....	.....	10	52	40	33	.....	35
	Company D.....	3	.....	3	40	21	61	.....	.....	.....	.....	10	51	55	25	.....	36
	Company E.....	3	.....	3	39	25	64	2	38	.....	.....	10	59	44	29	.....	38
	Company F.....	3	.....	3	59	19	78	.....	.....	.....	.....	10	75	34	27	.....	55
	Company G.....	3	.....	3	30	38	68	4	54	.....	.....	10	68	52	44	.....	8
	Company H.....	3	.....	3	36	22	58	.....	.....	.....	.....	10	51	45	29	.....	37
	Company I.....	2	.....	2	48	16	64	2	35	.....	.....	10	54	50	28	.....	34
	Company K.....	2	.....	2	40	21	61	.....	.....	.....	.....	10	59	39	23	.....	41
	Company L.....	3	.....	3	34	23	57	.....	.....	.....	.....	10	57	58	25	.....	22
	Company M.....	2	1	3	48	2	50	.....	.....	.....	.....	10	53	46	29	.....	14
Total.....		45	2	47	536	229	765	.....	157	.....	.....	.....	733	.....	385	371	.....
Aggregate inspected and recognized.....		105	6	111	1,068	360	1,428	.....	157	.....	.....	.....	1,379	.....	774	718	.....

Not serving with troops.

No record.

Second Infantry:	5	2	7	6	3	9	10	35	52	18	19	Do.
Field officers, etc.....	3	.....	3	27	.....	27	.....	.....	.....	.....	.....	.....
Headquarters company.....	.....	.....	.....	41	8	49	10	35	(1)	(1)	34	Do.
Band section.....	2	.....	2	.....	.....	10	10	14	.....	.....	13	Do.
Machine-gun company.....	2	1	3	4	6	61	10	60	63	24	39	Do.
Supply company.....	3	.....	3	47	14	10	10	45	51	15	42	Do.
Company A.....	3	.....	3	36	14	50	10	54	61	24	46	Do.
Company B.....	3	.....	3	48	18	66	10	59	49	24	54	Do.
Company C.....	3	.....	3	46	27	73	10	59	56	36	20	Do.
Company D.....	3	.....	3	55	1	56	10	38	58	31	26	Do.
Company E.....	3	.....	3	38	19	67	10	58	54	23	11	Do.
Company F.....	3	.....	3	40	15	55	10	70	65	45	32	Do.
Company G.....	2	.....	2	53	23	81	10	58	53	32	37	Do.
Company H.....	3	.....	3	64	1	65	10	48	51	31	31	Do.
Company I.....	3	.....	3	52	6	58	10	63	51	26	49	Do.
Company K.....	3	.....	3	50	15	65	10	42	60	20	39	Do.
Company L.....	3	.....	3	.....	24	62	10	.....	.....	.....	.....	Do.
Company M.....	3	.....	3	28	.....	.....	.....	.....	.....	.....	.....	Do.
Total.....	47	3	50	650	194	844	.....	728	.....	358	491	Do.
First Separate Company of Infantry.....	3	.....	3	62	24	86	10	92	47	53	40	Do.
Aggregate Inspected and recognized.....	123	4	127	1,486	439	1,926	.....	1,558	.....	864	1,045	Do.

No record.

TABLE 9.—Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.

MARYLAND—Continued.

Organization.	Station.	Strength at inspection.			Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).						Action taken by Division of Militia Affairs as result of inspection.			
		Officers.		Enlisted men.	Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.			Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).		
		Present.	Absent.		Total.	Present.	Absent.	Total.	Number.	Average actual attendance.			Number.	Average actual attendance.
Fifth Infantry:														
Field officers, etc.	Baltimore.	6	6	Placed on probation. Do.
Headquarters company.	do.	3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Band section.	do.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Machine-gun company.	do.	1	1	Placed on probation. Do.
Supply company.	do.	3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Company A.	do.	3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Company B.	do.	3	3	Placed on probation. Do.
Company C.	do.	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Company D.	do.	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Company E.	do.	2	2	Recognition with- drawn.
Company F.	do.	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Company G.	do.	3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Company H.	do.	3	3	Placed on probation. Do.
Company I.	do.	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Company K.	do.	3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Company L.	do.	3	3	Placed on probation. Do.
Company M.	do.	3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.		43	1	44	521	18	539	.....	449	.....	422	172	
First Separate Company of Infantry (colored).	Baltimore.	3	.....	3	64	2	66	2	57	87	40	20	
Aggregate inspected.		168	4	172	2,058	58	2,116	.....	1,717	.....	1,370	801	
Aggregate recognized.		164	4	168	1,974	50	2,024	.....	1,717	.....	1,370	801	

MASSACHUSETTS

Table of organization.

Fifth, Eighth, and Ninth Infantry.

First Corps of Cadets.

utions.

Companies, inclusive.

No. 1, Field Hospital No. 1; 10 detachments.

Organization.	Station.	Strength at inspection.				Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).				Action taken by Division of Militia Affairs as result of inspection.			
		Officers.		Enlisted men.		Consecutive days on practice march.		Consecutive days in camp set free for instruction.		Assemblies for drill and instruction.		Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).	
		Present.	Absent.	Total.	Present.	Absent.	Total.	Number.	Average actual attendance.	Number.	Average actual attendance.	Number.	Average actual attendance.
	Boston.....	1		1									1
	do.....	4		4									
	do.....	1		1									
	do.....	10		10									
	do.....	2		2									
Medical Department:													
Ambulance Company No. 1.....	do.....	3	1	3	49	8	57	1	51	20	57	38	41
Field Hospital No. 1.....	do.....	4		4	64		64			18	40	36	30
Detachments—													
First Squadron Cavalry.....	do.....	1		1	5	1	6	2	7	8	7	41	6
First Battalion Field Artillery.....	Lawrence.....	1		1	10		10	3	7	7	7	40	6
Second Battalion Field Artillery.....	Salem.....	1		1	9		9			8	10	47	7
Coast Artillery Corps.....	Boston.....	4	1	5	19	1	20			10	12	32	11
Second Infantry.....	Springfield.....	4		4	15		15	3	15	8	15	44	12

TABLE 9.—*Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.*

MASSACHUSETTS—Continued.

Organisation.	Station.	Strength at inspection.			Instruction during year ended Dec. 31, 1915 (sec. 18. militia law).						Action taken by Division of Militia Affairs as result of inspection.				
		Officers.			Enlisted men.			Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.		Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).	
		Present.	Absent.	Total.	Present.	Absent.	Total.	Number.	Average actual attendance.	Number.		Average actual attendance.	Number.		Average actual attendance.
Medical Department—Continued.															
Detachments—Continued.															
Fifth Infantry.....	Charlestown.....	3	.....	3	16	.....	16	.....	14	.....	25	(1) 7	.....	6
Sixth Infantry.....	Fitchburg.....	4	.....	4	13	2	15	.....	11	.....	43	14	.....	13
Eighth Infantry.....	Cambridge.....	4	.....	4	14	2	16	.....	.....	.....	40	11	.....	4
Ninth Infantry.....	Boston.....	4	.....	4	14	2	16	.....	15	.....	33	11	.....	8
First Corps Cadets.....	.....do.....	1	.....	1	6	.....	6	.....	.....	.....	28	2	.....	.....
Medical Corps ¹.....	.....do.....	4	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	.....do.....	38	2	40	225	16	241	.....	120	.....	.....	147	.....	56
Signal Corps:															
Company A.....	Boston.....	4	.....	4	97	1	98	.....	93	.....	46	80	.....	21
Cavalry:															
First Squadron—															
Headquarters.....	.....do.....	5	.....	5	3	1	4	.....	.....	.....	.....	(1) 15	.....	.....
Troop A.....	.....do.....	3	.....	3	65	.....	65	.....	.....	.....	.....	(1) 49	.....	13
Troop B.....	.....do.....	3	.....	3	65	.....	65	.....	.....	.....	.....	(1) 39	.....	54
Troop C.....	.....do.....	3	.....	3	65	.....	65	.....	.....	.....	.....	(1) 49	.....	23

Troop D.....	do.....	3	.....	3	63	.....	63	{	15	43	18	68	40	41	.....
Total.....	.....	17	.....	17	261	1	262	{	.....	97	.....	244	.....	49	80
														183	
Field Artillery:															
First Battalion—															
Headquarters.....	Boston.....	3	.....	3	14	.....	14	(1)	17	10	12	45	13	4	
Battery A.....	do.....	5	.....	5	146	2	148	.....	.....	10	125	34	107	.....
Battery B.....	Worcester.....	5	.....	5	128	3	131	6	90	9	126	20	102	48	
Battery C.....	Methuen.....	5	.....	5	115	13	128	5	32	9	124	40	77	14	
Total.....	.....	18	.....	18	403	18	421	.....	139	.....	387	.....	299	66	
Second Battalion ¹ —															
Headquarters.....	Salem.....	4	.....	4	1	.....	1	.....	.....	.....	.....	.....	.....	.....
Battery D.....	do.....	5	.....	5	92	21	113	.....	.....	.....	.....	.....	.....	.....
Battery E.....	do.....	5	.....	5	90	13	103	.....	.....	.....	.....	.....	.....	.....
Battery F.....	do.....	5	.....	5	90	16	106	.....	.....	.....	.....	.....	.....	.....
Total.....	.....	19	.....	19	273	50	323	.....	.....	.....	.....	.....	.....	.....
Coast Artillery Corps:															
Headquarters.....	Boston.....	13	.....	13	20	1	21	}	.....	.....	61	(1)	(1)	.....
Band.....	do.....	.....	.....	.....	23	3	26	.....	.....	10	78	40	55	26	
First Company.....	do.....	3	.....	3	74	1	75	.....	.....	10	72	41	46	23	
Second Company.....	do.....	2	.....	2	61	6	67	.....	.....	10	73	42	50	18	
Third Company.....	do.....	3	.....	3	57	9	66	.....	.....	10	77	48	62	.....
Fourth Company.....	New Bedford.....	3	.....	3	69	3	72	.....	.....	10	75	42	68	.....
Fifth Company.....	Chelsea.....	1	.....	1	56	10	66	.....	.....	10	75	40	53	12	
Sixth Company.....	Cambridge.....	3	.....	3	61	9	70	.....	.....	10	76	40	57	16	
Seventh Company.....	Boston.....	3	.....	3	74	1	75	.....	.....	10	69	44	47	14	
Eighth Company.....	do.....	3	.....	3	54	15	69	.....	.....	10	70	45	45	.....
Ninth Company.....	Taunton.....	3	.....	3	56	5	61	.....	.....	10	75	48	55	.....
Tenth Company.....	Brockton.....	3	.....	3	71	3	74	.....	.....	10	78	42	64	.....
Eleventh Company.....	Boston.....	3	.....	3	73	2	75	.....	.....	10	77	44	69	.....
Twelfth Company.....	Fall River.....	3	.....	3	69	3	72	.....	.....	.....	.....	.....	.....	.....
Total.....	.....	46	.....	46	818	71	889	.....	.....	.....	956	.....	671	109	
Second Infantry:															
Field officers, etc.....	Springfield.....	7	.....	7	.....	.....	.....	.....	.....	.....	6	(1)	(1)	.....
Headquarters company.....	do.....	4	.....	4	23	.....	23	.....	.....	.....	9	.....	.....	(1)	
Band section.....	do.....	.....	.....	.....	21	7	28	.....	.....	.....	.....	.....	.....	.....
Machine-gun company.....	do.....	2	.....	2	30	11	41	.....	.....	8	52	30	36	16	
Supply company.....	do.....	3	.....	3	11	1	12	.....	.....	8	5	.....	.....	.....
Company A.....	Worcester.....	3	.....	3	63	1	64	2	57	8	62	53	48	.....
Company B.....	Springfield.....	2	.....	2	45	7	52	2	29	8	52	43	40	Do.	
Company C.....	Worcester.....	3	.....	3	59	.....	59	.....	.....	8	55	61	48	4	

¹ No record.

² Mounted.

³ Dismounted.

⁴ Formerly Second Corps of Cadets; reorganized as Field Artillery Nov. 27, 1915.

Detachments—		Troops										Companies										Batteries										Platoons										Squadrons										Sections										Teams										Total										Grand Total																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			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DH										Troop DI										Troop DJ										Troop DK										Troop DL										Troop DM										Troop DN										Troop DO										Troop DP										Troop DQ										Troop DR										Troop DS										Troop DT										Troop DU										Troop DV										Troop DW										Troop DX										Troop DY										Troop DZ										Troop EA										Troop EB										Troop EC										Troop ED										Troop EE										Troop EF										Troop EG										Troop EH										Troop EI										Troop EJ										Troop EK										Troop EL										Troop EM										Troop EN										Troop EO										Troop EP										Troop EQ										Troop ER										Troop ES										Troop ET										Troop EU										Troop EV										Troop EW										Troop EX										Troop EY										Troop EZ										Troop FA										Troop FB										Troop FC										Troop FD										Troop FE										Troop FF										Troop FG										Troop FH										Troop FI										Troop FJ										Troop 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HN										Troop HO										Troop HP										Troop HQ										Troop HR										Troop HS										Troop HT										Troop HU										Troop HV										Troop HW										Troop HX										Troop HY										Troop HZ										Troop IA										Troop IB										Troop IC										Troop ID										Troop IE										Troop IF										Troop IG										Troop IH										Troop II										Troop IJ										Troop IK										Troop IL										Troop IM										Troop IN										Troop IO										Troop IP										Troop IQ										Troop IR										Troop IS										Troop IT										Troop IU										Troop IV										Troop IW										Troop IX										Troop IY										Troop IZ										Troop JA										Troop JB										Troop JC										Troop JD										Troop JE										Troop JF										Troop JG										Troop JH										Troop JI										Troop JJ										Troop JK										Troop JL										Troop JM										Troop JN										Troop JO										Troop JP										Troop 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LT										Troop LU										Troop LV										Troop LW										Troop LX										Troop LY										Troop LZ										Troop MA										Troop MB										Troop MC										Troop MD										Troop ME										Troop MF										Troop MG										Troop MH										Troop MI										Troop MJ										Troop MK										Troop ML										Troop MM										Troop MN										Troop MO										Troop MP										Troop MQ										Troop MR										Troop MS										Troop MT										Troop MU										Troop MV										Troop MW										Troop MX										Troop MY										Troop MZ										Troop NA										Troop NB										Troop NC										Troop ND										Troop NE										Troop NF										Troop NG										Troop NH										Troop NI										Troop NJ										Troop NK										Troop NL										Troop NM										Troop NN										Troop NO										Troop NP										Troop NQ										Troop NR										Troop NS										Troop NT										Troop NU										Troop NV										Troop 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PZ										Troop QA										Troop QB										Troop QC										Troop QD										Troop QE										Troop QF										Troop QG										Troop QH										Troop QI										Troop QJ										Troop QK										Troop QL										Troop QM										Troop QN										Troop QO										Troop QP										Troop QQ										Troop QR										Troop QS										Troop QT										Troop QU										Troop QV										Troop QW										Troop QX										Troop QY										Troop QZ										Troop RA										Troop RB										Troop RC										Troop RD										Troop RE										Troop RF										Troop RG										Troop RH										Troop RI										Troop RJ										Troop RK										Troop RL										Troop RM										Troop RN										Troop RO										Troop RP										Troop RQ										Troop RR										Troop RS										Troop RT										Troop RU										Troop RV										Troop RW										Troop RX										Troop RY										Troop RZ										Troop SA										Troop SB										Troop SC										Troop SD										Troop SE										Troop SF										Troop SG										Troop SH										Troop SI										Troop SJ										Troop SK										Troop SL										Troop SM										Troop SN										Troop SO										Troop SP										Troop SQ										Troop SR										Troop SS										Troop ST										Troop SU										Troop SV										Troop SW										Troop SX										Troop SY										Troop SZ										Troop TA										Troop TB										Troop TC										Troop TD										Troop TE										Troop TF										Troop TG										Troop TH										Troop TI										Troop TJ										Troop TK										Troop TL										Troop TM										Troop TN										Troop TO										Troop TP										Troop TQ										Troop TR										Troop TS										Troop TT										Troop TU										Troop TV										Troop TW										Troop TX										Troop TY										Troop TZ										Troop UA										Troop UB										Troop UC										Troop UD										Troop UE										Troop UF										Troop UG										Troop UH										Troop UI										Troop UJ										Troop UK										Troop UL										Troop UM										Troop UN										Troop UO										Troop UP										Troop UQ										Troop UR										Troop US										Troop UT										Troop UY										Troop UZ										Troop VA										Troop VB										Troop VC										Troop VD										Troop VE										Troop VF										Troop VG										Troop VH										Troop VI										Troop VJ										Troop VK										Troop VL										Troop VM										Troop VN										Troop VO										Troop VP										Troop VQ										Troop VR										Troop VS										Troop VT										Troop VY										Troop VZ										Troop WA										Troop WB										Troop WC										Troop WD										Troop WE										Troop WF										Troop WG										Troop WH										Troop WI										Troop WJ										Troop WK										Troop WL										Troop WM										Troop WN										Troop WO										Troop WP										Troop 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HN										Troop HO										Troop HP										Troop HQ										Troop HR										Troop HS										Troop HT										Troop HU										Troop HV										Troop HW										Troop HX										Troop HY										Troop HZ										Troop IA										Troop IB										Troop IC										Troop ID										Troop IE										Troop IF										Troop IG										Troop IH										Troop II										Troop IJ										Troop IK										Troop IL										Troop IM										Troop IN										Troop IO										Troop IP										Troop IQ										Troop IR										Troop IS										Troop IT										Troop IU										Troop IV										Troop IW										Troop IX										Troop IY										Troop IZ										Troop JA										Troop JB										Troop JC										Troop JD										Troop JE										Troop JF										Troop JG										Troop JH										Troop JI										Troop JJ										Troop JK										Troop JL										Troop JM										Troop JN										Troop JO										Troop JP										Troop 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TABLE 9.—Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.

MICHIGAN—Continued.

Organization.	Station.	Strength at inspection.			Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).						Action taken by Division of Militia Affairs as result of inspection.		
		Officers.		Enlisted men.		Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.			
		Present.	Absent.	Total.	Present.	Absent.	Total.	Number.	Average actual attendance.	Number.		Average actual attendance.	
													Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).
Thirty-second Infantry:	Grand Rapids.	7		7	10	5	15					7	Placed on probation.
Field officers, etc.	do.	4		4	27	1	28	10	43	46	22	20	
Headquarters company.	do.												
Band section.	do.												
Machine-gun company.	do.	2		2	1								
Supply company.	do.	3		3	47	20	67	10	62	50	38	24	
Company A.	Coldwater.	3		3	54	11	65	10	51	50	30	34	
Company B.	Adrian.	3		3	48	17	65	10	54	51	20	38	
Company C.	Kalamazoo.	3		3	65	6	71	10	83	54	43	31	
Company D.	do.	2		2	53	12	65	10	69	37	40	36	
Company E.	Ionia.	3		3	50	15	65	10	56	49	33	26	
Company F.	Grand Haven.	3		3	61	8	69	10	64	55	37	28	
Company G.	Muskegon.	3		3	48	17	65	10	61	47	27	42	
Company H.	Big Rapids.	3		3	74	12	86	10	63	47	28	53	
Company I.	Grand Rapids.	3		3	85	1	86	10	59	46	37	44	
Company K.	do.	3		3	67	8	75	10	62	40	26	56	
Company L.	do.	3		3	80	2	82	10	64	49	32		
Company M.	do.	3		3									
Total		51		51	770	136	906		173		796	413	444

TABLE 9.—Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.

MINNESOTA.

Table of organization.
 quarters, Austin): First, Second, and Third Infantry.
 First Field Artillery.
 : 4 detachments.

W. J. A. A. Burnquist, Adjutant-General.
 L. Paul, Inspector-Instructor.
 d Artillery—Capt. George R.
 mes M. Phelan, Medical Corps.

Organization.	Station.	Strength at inspection.				Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).						Action taken by Division of Militia Affairs as result of inspection.	
		Officers.		Enlisted men.		Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.			Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).
		Present.	Absent.	Total.	Present.	Absent.	Total.	Number.	Average actual attendance.	Number.	Average actual attendance.		
General officers of the line.....	Austin.....	1		1									
Adjutant General's Department..	St. Paul.....	2	2	4									
Inspector General's Department ..	do.....		1	1									
Judge Advocate General's Department.	do.....		1	1									
Quartermaster Corps.....	do.....	2	3	5	1		1						
Ordnance Department.....	do.....	1	1	2									
Medical Department—													
Detachments—													
First Field Artillery.....	do.....	3		3	16		16	10	19	35	10	0	
First Infantry.....	Minneapolis.....	3	1	4	17	3	20	7	20	(?)	(?)		
Second Infantry.....	Amboy.....	3	1	4	16		16	10	20	24	14	6	
Third Infantry.....	Duluth.....	4		4	16		16	4	10	25	13	18	
Medical Corps.....		1	1	2									
Total.....		14	8	17	65	3	68		69		43	20	

TABLE 9.—Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.

MINNESOTA—Continued.

Organization.	Station.	Strength at inspection.						Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).						Action taken by Division of Militia Affairs as result of inspection.	
		Officers.			Enlisted men.			Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.			Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).
		Present.	Absent.	Total.	Present.	Absent.	Total.	Number.	Average actual attendance.	Number.	Average actual attendance.	Number.	Average actual attendance.		
Second Infantry—Continued.	St. Peter.....	3	3	55	9	64	10	55	44	44	7	Placed on probation. Do.
Company A.....	Redwood Falls..	3	.....	3	68	9	77	.....	.....	10	50	26	47	17
Company L.....	Medison.....	2	1	3	46	16	62	.....	.....	10	47	50	43	15
Company M.....	.....	44	10	54	723	154	877	.....	.....	.....	674	.....	599	248
Third Infantry.	Duluth.....	7	7	7	Do.
.....	do.....	4	.....	4	5	1	6	.....	.....	.....	.....	.....	.....	11
.....	do.....	.....	.....	.....	25	3	28	.....	.....	10	34	70	17	22
.....	Rochester.....	2	.....	2	41	1	42	.....	.....	10	47	50	25	1
Supply company.	Duluth.....	3	3	2	2	9	6	Do.
Company A.....	do.....	1	.....	1	73	2	75	.....	.....	.....	.....	.....	.....	.....
Company B.....	Anoka.....	3	.....	3	53	10	63	.....	.....	10	53	51	51	11
Company C.....	Duluth.....	3	.....	3	61	11	72	.....	.....	10	57	42	56	1
Company D.....	Zumbrota.....	3	3	48	16	63	10	47	60	35	16	Do.
Company E.....	Duluth.....	3	.....	3	43	22	65	.....	.....	10	41	50	36	13
Company F.....	Eveleth.....	2	.....	2	40	19	59	.....	.....	10	47	41	41	12
Company G.....	Princeton.....	3	.....	3	54	13	67	.....	.....	10	49	42	40	27
Company H.....	Olivie.....	3	3	46	16	64	10	45	37	41	10	Do.
Company I.....	Crookston.....	3	.....	3	47	9	56	.....	.....	10	41	45	41	3
Company K.....	Stillwater.....	3	.....	3	67	8	75	.....	.....	10	57	45	46	37

Second Infantry—Continued.

Third Infantry.

Supply company.

Company A.

Company B.

Company C.

Company D.

Company E.

Company F.

Company G.

Company H.

Company I.

Company J.

Company K.

Company L.....	3	.....	3	61	3	64	.....	.....	10	45	49	36	15
Company M.....	3	.....	3	49	21	70	.....	.....	10	58	51	37	33
Red Wing.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hibbing.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	50	.....	150	717	154	871	.....	.....	.....	627	.....	502	219
Aggregate Inspected.....	198	24	222	2,660	471	3,131	.....	.....	.....	2,620	.....	2,051	1,012
Aggregate recognized.....	187	23	210	2,462	427	2,889	.....	36	.....	.....	.....	.....	.....

1 Includes one first lieutenant attached to machine-gun company.

Company E.....	3	1	3	45	24	60	3	43	10	58	17	41	Recognition with- drawn. Placed on probation.
Company L.....	2	1	3	31	84	85			16	43	24	36	71
Total.....	16	1	16	196	90	288		43		102		173	227
Second Independent Battalion of Infantry:													
Headquarters.....	4		4	1		1							
Company B.....	3		3	43	22	65			15	36	20	26	63
Company C.....	3		3	48	10	53			15	38	27	37	20
Company G.....	3		3	60	31	71			16	53	28	38	72
Company K.....	3		3	42	13	60			15	56	31	41	1
Caledonia.....													
Total.....	16		16	184	71	255				186		143	161
Fourth Independent Battalion of Infantry:													
Headquarters.....	4		4	1		1							
Company D.....	2	1	3	61	13	74			15	59	28	37	1
Company F.....	3		3	71	14	85			8	73	92	33	70
Company H.....	3		3	71		71	2	60	15	48	72	50	27
Company M.....	3		3	55	13	78			15	87	33	41	34
Kosciusko.....													11
Total.....	15	1	16	269	40	300		60		253		161	143
Fifth Independent Battalion of Infantry:													
Headquarters.....	4		4	1		1							
Company B.....	3		3	32	36	68			15	44	37	35	6
Company C.....	3		3	41	34	75	3	13	15	60	45	47	60
Company E.....	3		3	43	22	66			15	31	67	45	12
Clarksdale.....													
Vicksburg.....	3		3	58	12	70			15	47	62	32	23
Total.....	16		16	175	105	280		13		192		169	90
Aggregate inspected.....													
Aggregate recognized.....													
Arkahtula.....	3		3	60	7	67			15	43	25	36	22
Jackson.....				28		28			8	26	76	20	
Bomeville.....				28		28			15	23	51	19	
Total.....	77	3	80	967	313	1,280		144		904		732	653
Aggregate recognized.....	48	3	51	837	248	1,085							

: Not serving with troops.

TABLE 9.—Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.

MISSOURI.

1. Statement of the Militia Bureau.

2. Full of organization.

Inf. Gov. Elliott W. Major-
in, Jefferson City. Inspector-
and Oscar W. Hoop, Infantry.
Field Artillery—Capt. Waldo
M. Phelan, Medical Corps.

1st, Third, and Fourth Infantry.
Battalions.

No. 1; Field Hospital No. 1; 4 detachments.

Organization.	Station.	Strength at inspection.				Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).								Action taken by Division of Militia Affairs as result of inspection.
		Officers.		Enlisted men.		Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.		Number not actually present 21 times for drill and instruction (exclusive of field or camp service for instruction).		
		Present.	Absent.	Total.	Present.	Absent.	Total.	Number.	Average actual attendance.	Number.	Average actual attendance.			
General officers of the line.....	Nevada.....	1		1										
Adjutant General's Department.....	Jefferson City.....	1		1										
Infantry's Department.....	do.....	1		1										
	do.....	2		2	2									
	do.....	2		2										
<hr/>														
No. 1.....	Kansas City.....	3	1	4	33	10	43					45	30	30
	St. Joseph.....	2		2	26	2	27					62	19	7
	St. Louis.....	2		2	16	2	18					55	14	7
	Joplin.....	3		3	20		20			16		40	11	5
	Kansas City.....	2		2	7	11	13					50	9	8

TABLE 9.—*Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.*

MISSOURI--Continued.

Organization.	Station.	Strength at inspection.			Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).						Action taken by Division of Militia Affairs as result of inspection.			
		Officers.		Enlisted men.		Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.		Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).		
		Present.	Absent.	Total.	Present.	Absent.	Total.	Number.	Average actual attendance.	Number.			Average actual attendance.	
Third Infantry—Continued.												Recognition withdrawn. Do. Placed on probation. Do.		
Company C.....	Kansas City.....	3	.....	3	40	25	65	.....	.....	.....	.....		14	55
Company D.....	do.....	1	.....	1	45	20	65	.....	.....	.....	.....		25	45
Company E.....	do.....	3	.....	3	43	25	68	.....	.....	.....	.....		33	18
Company F (vacant).....	do.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		.....	.....
Company G.....	Kansas City.....	3	.....	3	19	46	65	.....	.....	.....	.....		19	57
Company H.....	Liberty.....	3	.....	3	54	15	69	.....	.....	.....	.....		38	60
Company I (vacant).....	do.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		.....	.....
Company K.....	Kansas City.....	2	.....	2	38	32	70	.....	.....	.....	.....		23	53
Company L.....	do.....	2	.....	2	42	47	89	.....	.....	.....	.....		24	52
Company M.....	do.....	3	.....	3	43	32	75	.....	.....	.....	.....		(1)	(1)
Total.....		26	1	37	493	306	799	.....	.....	.....	.....		270	432
Fourth Infantry:													Do.	
Field officers, etc.....	St. Joseph.....	6	.....	6	.....	.....	.....	.....	.....	.....	.....	.....		.....
Headquarters company.....	Maryville.....	4	.....	4	2	2	4	.....	.....	.....	.....	.....		.....
Band section.....	do.....	.....	.....	.....	22	6	28	.....	.....	.....	.....	27		12
Machine-gun company.....	do.....	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....		.....
Supply company.....	do.....	3	.....	3	2	.....	2	.....	.....	.....	.....	.....		.....
Company A.....	Tarkio.....	3	.....	3	40	19	59	.....	.....	.....	.....	25		23
Company B.....	Carruthersville.....	3	.....	3	37	30	67	.....	.....	.....	.....	35		45
Company C.....	Kirksville.....	3	.....	3	54	6	60	.....	.....	.....	.....	31		16

Company D.....	Trenton.....	3	.....	3	54	16	70	.....	8	51	107	22	28	Do.
Company E.....	Hannibal.....	3	.....	3	40	34	74	.....	8	43	60	32	51	Recognition with-
Company F.....	Maryville.....	2	1	3	37	21	58	.....	8	45	50	24	.....	drawn.
Company G.....	Bethany.....	3	.....	3	34	31	65	.....	8	45	51	26	23	Placed on probation.
Company H.....	Carrollton.....	3	.....	3	55	15	70	.....	8	52	31	46	19	
Company I.....	Chillicothe.....	2	1	3	56	15	71	.....	8	42	(1)	(1)	82	
Company K.....	Weston.....	3	.....	3	68	3	71	.....	.....	.....	18	50	75	
Company L (vacant).....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Company M.....	St. Joseph.....	3	.....	3	60	5	65	.....	.....	.....	13	49	68	
Total.....	.....	46	2	48	567	211	778	.....	.....	457	.....	367	442	
Second Separate Battalion of In-	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
fantry:	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Headquarters.....	Carthage.....	3	.....	3	1	.....	1	.....	.....	.....	.....	.....	8	
Company A.....	do.....	3	.....	3	52	14	66	.....	.....	.....	.....	.....	11	
Company B.....	Butler.....	2	.....	2	48	27	75	.....	.....	.....	.....	.....	16	
Company C.....	Lamar.....	2	1	3	41	31	72	.....	.....	.....	.....	.....	15	
Company D.....	West Plains.....	3	.....	3	34	34	68	.....	.....	.....	.....	.....	22	
Total.....	.....	13	1	14	176	106	282	.....	.....	.....	.....	173	72	
Third Separate Battalion of In-	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
fantry:	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Headquarters.....	Webb City.....	3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Company E.....	Pierce City.....	1	1	2	40	28	68	.....	.....	.....	.....	.....	25	
Company F.....	Clinton.....	3	.....	3	38	30	68	.....	.....	.....	.....	.....	39	
Company G.....	Joplin.....	3	.....	3	45	22	67	.....	.....	.....	.....	.....	40	
Company I.....	Webb City.....	2	1	3	43	27	70	.....	.....	.....	.....	.....	33	
Total.....	.....	12	2	14	166	107	273	.....	.....	.....	.....	140	137	
Separate companies of Infantry:	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Company K.....	Springfield.....	3	.....	3	56	9	65	.....	.....	.....	.....	.....	28	
Company L.....	Jefferson City.....	2	1	3	39	25	64	.....	.....	.....	.....	.....	44	
Company M.....	Aurora.....	3	.....	3	46	23	69	.....	.....	.....	.....	.....	61	
Machine-gun company.....	Nevada.....	2	.....	2	36	9	45	.....	.....	.....	.....	.....	62	
Aggregate inspected.....	.....	209	9	218	2,821	1,186	4,007	.....	.....	2,222	.....	1,814	2,019	
Aggregate recognized.....	.....	200	7	207	2,687	1,059	3,746	.....	.....	.....	.....	.....	.....

1 No record.

Company G.....	Glasgow.....	2	1	3	42	18	60	(2)	.....	7	45	(1)	(2)	18	(2)	37	Do.
Company K.....	Billings.....	3	.....	3	32	29	61	.....	.....	.....	.....	.....	.....	.....	.....	.....	Do.
Total.....	.....	15	1	16	156	97	253	.....	.....	.....	45	.....	.....	61	109	.....
Second Battalion—																	
Headquarters.....	Helena.....	3	.....	3	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	Do.
Company D.....	Valier.....	2	.....	2	42	18	60	.....	.....	.....	.....	.....	.....	.....	.....	.....
Company F.....	Kalispell.....	3	.....	3	83	.....	83	1	32	.....	.....	(2)	.....	.....	.....	.....
Company H.....	do.....	3	.....	3	67	7	74	1	37	.....	.....	37	.....	23	37	.....
Company M.....	Choteau.....	3	.....	3	50	11	61	.....	.....	.....	.....	52	.....	21	48	.....
Total.....	.....	14	.....	14	243	36	279	.....	69	.....	.....	.....	.....	81	85	.....
First Separate Company, Infantry.....	Roundup.....	3	.....	3	37	26	63	.....	.....	.....	.....	34	.....	12	51	.....
Second Separate Company, Infantry.....	Shelby.....	3	.....	3	44	17	61	.....	.....	.....	.....	34	.....	13	53	.....
Third Separate Company, Infantry.....	Baker.....	3	.....	3	46	17	63	.....	.....	.....	.....	37	.....	12	.....	.....
Aggregate inspected and recognized.....	.....	45	5	50	539	195	734	.....	69	.....	46	.....	.....	179	306	.....

1 No record.

1 Not serving with troops.

TABLE 9.—Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.

NEBRASKA.

State designation: Nebraska National Guard.

State headquarters: Lincoln. Commander in chief: Gov. John H. Morehead. Adjutant

General: Brig. Gen. F. L. Hall, jr., address, Lincoln. Inspector-instructor: None.

Table of organization.

Infantry.

Co B.

Sanitary troops: Field Hospital No. 1; 2 detachments.

Organization.	Station	Strength at inspection.				Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).								Action taken by Division of Militia Affairs as result of inspection.
		Officers.		Enlisted men.		Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.		Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).		
		Present.	Absent.	Total.	Present.	Absent.	Total.	Number.	Average actual attendance.	Number.	Average actual attendance.			
Infantry.	Lincoln	2		2										
Infantry.	do	1		1										
Co B.	do		1	1										
	do	1		1	1									
	do	1		1	1									
	do													
	do													
	do													
Medical Department:														
Field Hospital No. 1.	do	4	1	5	33	7	39		13	43	51	17	33	
Detachments—														
Fourth Infantry	Freemont	2		2	17	5	22		7	17	20	11	17	
Fifth Infantry	Bennet	2		2	20	1	21		10	(1)	31	16	19	
Medical Corps ² .		4		4										
Total		12	1	13	69	13	82			60		42	59	
Signal Corps:														
Company A.	Freemont	4		4	45	31	76		7	76	45	49	31	Placed on probation.

Fourth Infantry.	7	3	1	7	3	28	3	28	33	627	(1)	(1)	7
Field officers, etc.	Stanton	Omaha	do	Winn	do	Omaha	do	do	do	do	do	do	do
Headquarters company.	3	3	1	3	3	3	3	3	3	3	3	3	3
Band section.	1	3	1	3	3	3	3	3	3	3	3	3	3
Machine-gun company.	3	3	1	3	3	3	3	3	3	3	3	3	3
Supply company.	3	3	1	3	3	3	3	3	3	3	3	3	3
Company A.	3	3	1	3	3	3	3	3	3	3	3	3	3
Company B.	3	3	1	3	3	3	3	3	3	3	3	3	3
Company C.	3	3	1	3	3	3	3	3	3	3	3	3	3
Company D.	3	3	1	3	3	3	3	3	3	3	3	3	3
Company E (vacant).	3	3	1	3	3	3	3	3	3	3	3	3	3
Company F.	3	3	1	3	3	3	3	3	3	3	3	3	3
Company G.	3	3	1	3	3	3	3	3	3	3	3	3	3
Company H.	3	3	1	3	3	3	3	3	3	3	3	3	3
Company I.	3	3	1	3	3	3	3	3	3	3	3	3	3
Company J.	3	3	1	3	3	3	3	3	3	3	3	3	3
Company K.	3	3	1	3	3	3	3	3	3	3	3	3	3
Company L.	3	3	1	3	3	3	3	3	3	3	3	3	3
Company M.	3	3	1	3	3	3	3	3	3	3	3	3	3
Total.	46	1	47	549	270	828	33	627	321	437			
St. Paul.	6	1	7	3	3	3	3	3	3	3	3	3	7
Omaha.	4	4	4	20	6	28	3	3	3	3	3	3	20
do.	2	2	2	2	2	2	2	2	2	2	2	2	2
do.	3	3	3	44	17	41	3	3	3	3	3	3	3
do.	3	3	3	31	15	46	3	3	3	3	3	3	3
Lincoln.	3	3	3	47	22	60	3	3	3	3	3	3	3
Nebraska City.	3	3	3	42	16	58	3	3	3	3	3	3	3
Beatrice.	3	3	3	42	24	66	3	3	3	3	3	3	3
Auburn.	3	3	3	42	24	66	3	3	3	3	3	3	3
Wymore.	3	3	3	42	24	66	3	3	3	3	3	3	3
Hastings.	3	3	3	42	24	66	3	3	3	3	3	3	3
Fairfield.	3	3	3	42	24	66	3	3	3	3	3	3	3
Ord.	2	1	3	38	14	53	3	3	3	3	3	3	3
Blue Hill.	3	3	3	38	14	53	3	3	3	3	3	3	3
Gothenburg.	2	1	3	38	14	53	3	3	3	3	3	3	3
Holdrege.	3	3	3	38	14	53	3	3	3	3	3	3	3
Total.	46	3	49	452	228	680	33	454	228	346			
Aggregate inspected.	113	6	119	1,117	551	1,868	33	1,217	640	873			
Aggregate recognized.	104	6	110	1,015	492	1,597							

No record.

Not serving with troop.

TABLE 9.—Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.

NEW JERSEY.

Table of organization.

1st, Fourth, and Fifth Infantry.

De A.
No. 1; First Field Hospital, 8 detachments.

Organization.	Station.	Strength at inspection.			Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).						Action taken by Division of Militia Affairs as result of inspection.		
		Officers.		Enlisted men.		Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.			
		Present.	Absent.	Total.	Present.	Absent.	Total.	Number.	Average actual attendance.	Number.		Average actual attendance.	Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).
General officers of the line	Newark	1		1									
Adjutant General's Department	Trenton	4		4									
Inspector General's Department	do.	1		1									
Judge Advocate General's Department	do.	2		2									
Quartermaster Corps	do.	10		10									
Ordnance Department	do.	2		2	1		1						
Medical Department													
Ambulance Company No. 1	Red Bank	2		2	35		35	11	35	36	32	11	
First Field Hospital	Elizabeth	2		2	24	5	29	10	35	37	22	3	
Detachments—													
Signal Corps	Jersey City	1		1	2		2	8	3			3	
Squadron Cavalry	Newark	1		1	6		6	8	6	32	7		
Field Artillery	East Orange	1		1	6		6					7	
First Infantry	Newark	4		4	15		15	8	6	31	14	6	

Company G.....	3	1	3	42	18	60	(?)	.....	7	45	(?)	18	(?)	Do.
Company K.....	3	.....	3	32	20	61	.....	.....	.....	.....	55	.....	37	Do.
Total.....	15	1	16	150	97	263	.....	.....	.....	45	.....	61	100	
Second Battalion—														
Headquarters.....	3	.....	3	1	.....	1	.....	.....	.....	.....	(?)	.....	.....	Do.
Company D.....	2	.....	2	42	18	60	.....	.....	.....	.....	(?)	37	(?)	
Company F.....	3	.....	3	53	.....	53	.....	22	.....	.....	32	.....	.....
Company H.....	3	.....	3	67	7	74	.....	37	.....	.....	37	23	37	
Company M.....	3	.....	3	50	11	61	.....	.....	.....	.....	52	31	48	
Total.....	14	.....	14	243	36	279	.....	60	.....	.....	.....	81	85	
First Separate Company, Infantry	3	.....	3	37	26	63	.....	.....	.....	.....	34	12	51	
Second Separate Company, In-	3	.....	3	44	17	61	.....	.....	.....	.....	24	13	53	
fantry.														
Third Separate Company, In-	3	.....	3	46	17	63	.....	.....	.....	.....	37	12	.....
fantry.														
Aggregate inspected and	45	5	50	530	195	734	.....	60	.....	46	.....	179	306	
recognized.														

¹ Not serving with troops.

² No record.

TABLE 9.—Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.

NEW JERSEY—Continued.

Organization.	Station.	Strength at inspection.			Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).						Action taken by Division of Militia Affairs as result of inspection.		
		Officers.		Enlisted men.		Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.		Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).	
		Present.	Absent.	Total.	Present.	Absent.	Total.	Number.	Average actual attendance.	Number.			Average actual attendance.
Fifth Infantry—Continued.	Paterson.....	2	38	7	45	32	Placed on probation. Do. Do.
Company D.....	do.....	2	..	2	58	6	64	..	..	32	25	47
Company E.....	do.....	2	..	2	60	..	60	..	..	33	60	28
Company F.....	Englewood.....	3	..	3	45	1	46	..	..	32	39	27
Company G.....	Hackensack.....	3	..	3	45	2	47	..	..	35	37	22
Company H.....	Orange.....	3	..	3	65	..	65	..	..	33	43	48
Company I.....	do.....	3	..	3	57	..	57	..	..	34	40	39
Company K.....	Montclair.....	2	..	2	36	2	38	..	..	28	33	28
Company L.....	Ridgewood.....	2	..	2	44	1	45	..	..	34	33	29
Company M.....	Rutherford.....	46	..	46	655	32	687	..	..	..	489	434
Total.....	.....	297	4	301	3,747	274	4,021	373	..	..	2,096	2,303
Aggregate inspected and recognized.	.....											

NEW MEXICO.

State designation: National Guard of New Mexico.
State headquarters: Santa Fe. Commander in chief: Gov. William C. McDonald.
Adjutant General: Brig. Gen. Harry T. Herring; address, Santa Fe. Inspector-instructors: Infantry—Capt. Ben F. Ristine, Infantry; Field Artillery—Capt. William F. Sharp, Field Artillery.

Infantry: First Infantry.
Field Artillery: Battery A.
Sanitary troops: 1 detachment.

Table of organizations.

Organization.	Station.	Strength at inspection.				Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).						Action taken by Division of Militia Affairs as result of inspection.		
		Officers.		Enlisted men.		Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.			Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).	
		Present.	Absent.	Total.	Present.	Absent.	Total.	Number.	Average actual attendance.	Number.	Average actual attendance.			
Adjutant General's Department.	Santa Fe.....	1		1										
Judge Advocate General's Department.	.....do.....	1		1										
Quartermaster Corps.....	.....do.....		2	2										
Medical department: Detachment—														
First Infantry.....	Albuquerque....	1		1	4	5	9	6	8			(1)	(1)	
Medical Corps.....	.....	5	1	6										
Total.....	.....	6	1	7	4	5	9	6	8					
Field Artillery: Battery A.....	Roswell.....	5		5	103	21	124			12	121	67	51	13
First Infantry: Field officers, etc.....	Santa Fe.....	5	1	6										6
Headquarters company.....	.....do.....	3	1	4	3	2	5					60	18	9
Band section.....	.....do.....				27	2	29							

¹ No record.

² Not serving with troops.

TABLE 9.—Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.

NEW MEXICO—Continued.

Organisation	Station.	Strength at inspection.			Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).						Action taken by Division of Militia Affairs as result of inspection.				
		Officers.			Enlisted men.			Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.			
		Present.	Absent.	Total.	Present.	Absent.	Total.	Number.	Average actual attendance.	Number.		Average actual attendance.	Number.	Average actual attendance.	Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).
First Infantry—Continued.	Santa Fe.....	2	2	2	1		1							6	Placed on probation. Do. Do. Do.
Machine-gun company.....	do.....	1		3	46	15	61							11	
Supply company.....	do.....	2		2	43		43	6		(1)	(1)			28	
Company A.....	Las Cruces.....	2	1	3	33		33					29	34		
Company B.....	Carlsbad.....	2		3	39		39			5	39	55	12		
Company C.....	Artesia.....	3	1	3	52		52	6				20	39	3	
Company D.....	Las Cruces.....	3		3	19		19	6				14	32		
Company E.....	Santa Fe.....	3		3	20		20	6				36	13		
Company F.....	do.....	1	2	3	47		47	6				(1)	(1)	60	
Company G.....	Albuquerque.....	3		3	20		20	6				8	40		
Company H.....	Silver City.....	3		3	44		44					48	19	76	
Company I.....	Deming.....	3		3	30		30	1		8	42	30	21	48	
Company K.....	Clovis.....	3		3	18		18							10	
Company L.....	Albuquerque.....	1	2	3	35		35								
Company M.....	Portales.....	2		2	26		26	(1)	(1)			34	26	10	
Total.....		42	10	52	426	807	743		180		81		253	267	
Aggregate inspected.....		55	13	68	543	333	870				202		304	280	
Aggregate recognised.....		54	13	67	539	328	807		188						

¹ No record.

² Includes 3 officers unassigned.

NEW YORK.

Table of organization.

(Division: Headquarters, Albany.)

Infantry, and Seventy-third, and Forty-fourth Infantry.

First Company; First

Organization.	Station.	Strength at inspection.						Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).						Action taken by Division of Militia Affairs as result of inspection.
		Officers.			Enlisted men.			Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.		Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).
		Present.	Absent.	Total.	Present.	Absent.	Total.	Number.	Average actual attendance.	Number.	Average actual attendance.	Number.	Average actual attendance.	
(1)	Albany	4	1	5										
	do.	6		6										
	do.	5		5										
	do.	3		3										
	do.	15		15	42		42							
	do.	7		7	14		14							

1 Commanders of division and brigades.

TABLE 9.—Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.

NEW YORK—Continued.

Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).										Action taken by Division of Militia Affairs as result of inspection.	
onsecutive days on practice march.		Assemblies for drill and instruction.		Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).		Number taken by Division of Militia Affairs as result of inspection.		Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).			
Number.	Average actual attendance.	N	A	Number.	Average actual attendance.	Number.	Average actual attendance.	Number.	Average actual attendance.		
1	50	9	51	37	50	12	50	12	50		
2	54	8	64	33	58	19	58	19	58		
		8	60	30	55	12	55	12	55		
3	53	8	48	32	40	9	40	9	40		
		8	45	30	45	10	45	10	45		
		10	12	28	26	9	26	9	26		
		16	3	30	4	3	4	3	4		
2	(1)	8	20	20	17	3	17	3	17		
		8	1	30	33	1	33	1	33		
		8	1	40	1		1		1		
3	1	8	1	41	1		1		1		
		8	1	27	8	3	8	3	8		
		10	16	31	14	10	14	10	14		
		10	1	30	1		1		1		
				31	2		2		2		
		10	17	31	27		27		27		
		16	18	26	18		18		18		

NEW YORK—Continued.

Ninth Coast Defense Command.	.....do.....	3	.....	3	12	2	14	.....	.....	15	22	37	19	1
Thirteenth Coast Defense Command.	Brooklyn.....	4	.....	4	16	.....	16	.....	.....	15	22	32	28	4
First Infantry.....	Middletown.....	2	2	4	21	3	24	.....	.....	.....	.....	41	21	18
Second Infantry.....	Troy.....	4	.....	4	28	.....	28	.....	.....	.....	.....	25	27	18
Third Infantry.....	Rochester.....	4	.....	4	17	.....	17	.....	.....	.....	.....	28	23	7
Seventh Infantry.....	New York.....	4	.....	4	14	.....	14	.....	.....	8	10	28	14	5
Tenth Infantry.....	Albany.....	4	.....	4	17	1	18	.....	.....	.....	.....	31	21	10
Twelfth Infantry.....	New York.....	2	.....	2	17	2	19	.....	.....	8	24	34	21	9
Fourteenth Infantry.....	Brooklyn.....	4	.....	4	17	2	19	.....	.....	8	20	37	19	5
Twenty-third Infantry.....	.....do.....	2	.....	2	15	3	18	.....	.....	8	13	22	14	20
Forty-seventh Infantry.....	.....do.....	4	.....	4	17	.....	17	.....	.....	8	19	25	18	5
Sixty-fifth Infantry.....	Buffalo.....	2	.....	2	8	9	17	.....	.....	.....	.....	33	10	13
Sixty-ninth Infantry.....	New York.....	4	.....	4	18	2	20	2	17	8	22	29	18	8
Seventy-first Infantry.....	.....do.....	3	.....	3	18	.....	18	.....	.....	8	19	32	21	.....
Seventy-fourth Infantry.....	Buffalo.....	4	.....	4	20	.....	20	.....	.....	.....	.....	31	17	12
Medical Corps ¹.....	.....	11	.....	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	.....	109	2	111	653	40	693	.....	175	.....	538	.....	709	277
Twenty-second Corps of Engineers:														
Headquarters.....	.....	6	.....	6	.....	.....	.....	1	10	12	9	31	9	.....
Band.....	New York.....	.....	.....	.....	18	.....	18	.....	.....	.....	.....	20	11	.....
First Battalion—														
Headquarters.....	.....do.....	3	.....	3	2	.....	2	1	5	12	6	25	6	.....
Company A.....	.....do.....	2	.....	2	62	3	65	1	57	12	62	28	59	34
Company B.....	.....do.....	3	.....	3	50	1	51	1	45	12	48	25	39	36
Company C.....	.....do.....	2	1	3	71	10	81	1	57	12	70	25	71	60
Company D.....	.....do.....	3	.....	3	53	1	54	1	34	15	44	26	35	46
Total.....	.....	13	1	14	238	15	253	.....	198	.....	230	.....	210	176
Second Battalion—														
Headquarters.....	New York.....	2	1	3	2	.....	2	1	5	12	6	25	6	.....
Company E.....	.....do.....	3	.....	3	49	5	54	1	37	12	49	28	51	35
Company F.....	.....do.....	3	.....	3	64	26	90	1	82	12	82	28	73	39
Company G.....	.....do.....	2	.....	2	45	10	55	1	53	12	53	28	54	18
Company H.....	.....do.....	2	.....	2	47	13	60	1	53	12	49	28	56	35
Total.....	.....	12	1	13	207	54	261	.....	230	.....	239	.....	240	127
Signal Corps:														
First Battalion—														
Headquarters.....	New York.....	3	.....	3	21	.....	21	1	15	16	11	32	16	11
Company A.....	.....do.....	2	.....	2	53	3	56	2	55	8	69	34	71	.....
Company B.....	Brooklyn.....	2	.....	2	52	.....	52	2	15	8	36	44	51	8
Total.....	.....	7	.....	7	126	3	129	.....	85	.....	116	.....	138	19

¹ Not serving with troops.

¹ No record.

TABLE 9.—Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.

NEW YORK—Continued.

Organisation.	Station.	Strength at inspection.			Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).						Action taken by Division of Militia Affairs as result of inspection.				
		Officers.		Enlisted men.	Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.			Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).			
		Present.	Absent.		Total.	Present.	Absent.	Total.	Number.	Average actual attendance.			Number.	Average actual attendance.	
Cavalry: First Cavalry— Headquarters.....	Brooklyn.....	15	15	7	7	(1) 24	120	18	120	131	122	265
Troop A.....	do.....	3	.....	3	59	.....	59	(2) 28	24	28	24	129	(1) 150	24
Troop B.....	Albany.....	2	.....	2	61	.....	61	(2) 28	52	28	52	138	(1) 144	9
Troop C.....	Brooklyn.....	2	.....	2	66	.....	66	(2) 28	30	28	30	131	144	14
Troop D.....	Syracuse.....	2	.....	2	67	.....	67	(2) 28	57	28	57	131	159	25
Troop E.....	Brooklyn.....	3	.....	3	62	.....	62	(2) 28	45	28	45	(1) 159	159	23
Troop F.....	West New Brighton.	3	.....	3	57	1	58	(2) 28	36	28	36	131	154	25
Troop G.....	Utica.....	2	.....	2	43	3	46	(2) 28	41	28	41	128	148	16
Troop H.....	Rochester.....	3	.....	3	76	.....	76	(2) 28	54	28	54	133	136	32
Troop I.....	Buffalo.....	3	.....	3	95	.....	95	(2) 28	64	28	64	140	160	51
Troop K.....	Brooklyn.....	3	.....	3	67	.....	67	(2) 28	59	28	59	131	162	19
Troop L.....	do.....	3	.....	3	68	.....	68	(2) 28	41	28	41	130	164	14
Troop M.....	Avon.....	1	2	3	45	13	58	(2) 28	27	28	27	142	127	13	
Total.....	.....	45	2	47	773	17	790	268 45	1325	.....	1325	1879	.....	265

TABLE 9.—Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.

NEW YORK—Continued.

Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).										Action taken by Division of Militia Affairs as result of inspection.	
Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.		Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).					
Number.	Average actual attendance.	Number.	Average actual attendance.	Number.	Average actual attendance.						
.....	15	63	30	51	19					
.....	15	57	35	47	28					
.....	71.1	.....	579	209					
.....	15	39	36	41	34					
.....	15	52	35	55	9					
.....	15	55	35	42	19					
.....	15	54	31	45	28					
.....	15	68	34	59	15					
.....	15	52	35	38	15					
.....	15	48	32	42	13					
.....	15	90	33	64	54					
.....	15	47	32	41	13					
.....	15	52	32	49	20					
.....	15	56	33	48	16					
.....	61.4	.....	524	206					

Ninth Coast Defense Command.	do.	3		3	12	2	14		15	22	37	19	1
Thirteenth Coast Defense Command.	Brooklyn.	4		4	16		16		15	22	32	28	4
First Infantry.	Middletown.	2	2	4	21	3	24				41	21	18
Second Infantry.	Troy.	4		4	28		28				25	27	18
Third Infantry.	Rochester.	4		4	17		17				28	23	7
Seventh Infantry.	New York.	4		4	14		14		8	10	28	14	5
Tenth Infantry.	Albany.	4		4	17	1	18				31	21	10
Twelfth Infantry.	New York.	2		2	17	2	19		8	24	34	21	9
Fourteenth Infantry.	Brooklyn.	4		4	17	2	19		8	20	37	19	5
Twenty-third Infantry.	do.	2		2	15	3	18		8	13	23	14	20
Forty-seventh Infantry.	do.	4		4	17		17		8	19	25	18	5
Sixty-fifth Infantry.	Buffalo.	2		2	8	9	17				33	10	13
Sixty-ninth Infantry.	New York.	4		4	18	2	20	2	8	22	29	18	8
Seventy-first Infantry.	do.	3		3	18		18		8	19	32	21	
Seventy-fourth Infantry.	Buffalo.	4		4	20		20				31	17	12
Medical Corps.		11		11									
Total.		109	2	111	653	40	603		175	538		709	277
Twenty-second Corps of Engineers:													
Headquarters Band.	New York.	6		6	18		18	1	10	9	31	9	
First Battalion—													
Headquarters.	do.	3		3	2		2	1	5	6	25	6	
Company A.	do.	2		2	62	3	65	1	57	62	28	59	34
Company B.	do.	3		3	50	1	51	1	45	48	25	39	36
Company C.	do.	2	1	3	71	10	81	1	57	70	25	71	60
Company D.	do.	3		3	53	1	54	1	34	44	26	35	46
Total.		13	1	14	238	15	253		196	230		210	176
Second Battalion—													
Headquarters.	New York.	2	1	3	2		2	1	5	6	25	6	
Company E.	do.	3		3	49	5	54	1	37	49	28	51	35
Company F.	do.	3		3	64	26	90	1	82	82	28	73	39
Company G.	do.	2		2	45	10	55	1	53	53	28	54	18
Company H.	do.	2		2	47	13	60	1	53	49	28	56	35
Total.		12	1	13	207	54	261		230	259		240	127
Signal Corps:													
First Battalion—													
Headquarters.	New York.	3		3	21		21	1	16	11	23	16	11
Company A.	do.	2		2	53	3	56	2	55	60	34	71	
Company B.	Brooklyn.	2		2	52		52	2	15	36	44	51	8
Total.		7		7	126	3	129		85	116		138	19

No record.

Not serving with troops.

TABLE 9.—Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.

NEW YORK—Continued.

Organization.	Station.	Strength at inspection.			Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).						Action taken by Division of Militia Affairs as result of inspection.				
		Officers.		Enlisted men.		Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.					
		Present.	Absent.	Total.	Present.	Absent.	Total.	Number.	Average actual attendance.	Number.		Average actual attendance.	Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).		
Second Infantry—Continued.															
Company C.....	Gloversville.....	40	.....	40	759	22	781	.....	622	.....	.....	764	.....	322	58
Company H.....	Amsterdam.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	20
Company I.....	Whitehall.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	27
Company K.....	Glens Falls.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	57
Company L.....	Saratoga Springs.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	13
Company M.....	Hondaick Falls.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	32
Total.....		40	.....	40	759	22	781	.....	622	.....	.....	764	.....	322	
.....	Rochester.....	6	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	do.....	1	.....	1	15	.....	15	.....	.....	.....	.....	.....	.....	.....
.....	Rochester.....	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	do.....	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	do.....	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	Geneva.....	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6
.....	Syracuse.....	2	.....	2	92	1	93	.....	.....	.....	.....	.....	.....	.....	61
.....	Oswego.....	2	.....	2	59	.....	59	.....	.....	.....	.....	.....	.....	.....	48
.....	Niagara Falls.....	2	.....	2	72	1	73	.....	.....	.....	.....	.....	.....	.....	41
.....	Medina.....	2	.....	2	66	.....	66	.....	.....	.....	.....	.....	.....	.....	64
.....	Rochester.....	2	.....	2	72	.....	72	.....	.....	.....	.....	.....	.....	.....	46
.....	do.....	2	.....	2	66	.....	66	.....	.....	.....	.....	.....	.....	.....	36
.....	do.....	2	.....	2	70	.....	70	.....	.....	.....	.....	.....	.....	.....	41
.....	do.....	2	.....	2	66	.....	66	.....	.....	.....	.....	.....	.....	.....	46
.....	do.....	2	.....	2	76	.....	76	.....	.....	.....	.....	.....	.....	.....	61
.....	do.....	2	.....	2	66	.....	66	.....	.....	.....	.....	.....	.....	.....	46

Placed on probation.
Do.
Do.
Do.

Squadron A—													
Headquarters.....	New York.....	4	1	1	1	1	1	1	1	1	1	1	1
Troop A.....	do.....	3	63	63	63	63	63	63	63	63	63	63	63
Troop B.....	do.....	3	64	64	64	64	64	64	64	64	64	64	64
Troop C.....	do.....	3	68	68	68	68	68	68	68	68	68	68	68
Troop D.....	do.....	3	66	66	66	66	66	66	66	66	66	66	66
Total.....		16	271	271	271	271	271	271	271	271	271	271	271
Machine-gun Troop.....													
Headquarters.....	New York.....	3	67	67	67	67	67	67	67	67	67	67	67
First Field Artillery:													
Headquarters.....	do.....	10	11	40	40	40	40	40	40	40	40	40	40
Battery A.....	do.....	5	5	26	26	26	26	26	26	26	26	26	26
Battery B.....	Syracuse.....	4	5	105	105	105	105	105	105	105	105	105	105
Battery C.....	New York.....	4	4	88	88	88	88	88	88	88	88	88	88
Battery D.....	Binghamton.....	3	3	90	90	90	90	90	90	90	90	90	90
Battery E.....	New York.....	3	3	103	103	103	103	103	103	103	103	103	103
Battery F.....	do.....	4	4	121	121	121	121	121	121	121	121	121	121
Battery G.....	do.....	6	5	111	111	111	111	111	111	111	111	111	111
Total.....		34	35	634	634	634	634	634	634	634	634	634	634
Second Field Artillery:													
Headquarters.....	Brooklyn.....	12	12	17	17	17	17	17	17	17	17	17	17
Battery A.....	do.....	3	3	74	74	74	74	74	74	74	74	74	74
Battery B.....	do.....	5	5	82	82	82	82	82	82	82	82	82	82
Battery C.....	do.....	3	3	103	103	103	103	103	103	103	103	103	103
Battery D.....	New York.....	4	4	118	118	118	118	118	118	118	118	118	118
Battery E.....	do.....	4	4	122	122	122	122	122	122	122	122	122	122
Battery F.....	do.....	4	4	97	97	97	97	97	97	97	97	97	97
Total.....		35	35	634	634	634	634	634	634	634	634	634	634
New York.....													
Headquarters.....	do.....	12	12	9	9	9	9	9	9	9	9	9	9
Battery A.....	do.....	1	1	26	26	26	26	26	26	26	26	26	26
Battery B.....	do.....	3	3	64	64	64	64	64	64	64	64	64	64
Battery C.....	do.....	2	2	47	47	47	47	47	47	47	47	47	47
Battery D.....	do.....	2	2	70	70	70	70	70	70	70	70	70	70
Battery E.....	do.....	2	2	59	59	59	59	59	59	59	59	59	59
Battery F.....	do.....	2	2	86	86	86	86	86	86	86	86	86	86
Battery G.....	do.....	2	2	44	44	44	44	44	44	44	44	44	44
Battery H.....	do.....	3	3	57	57	57	57	57	57	57	57	57	57
Battery I.....	do.....	3	3	50	50	50	50	50	50	50	50	50	50

* Mounted and dismounted.
 * Mounted.
 * Dismounted.
 * Includes headquarters detachment of 27 men, 9, 8, 5, and 3, detailed from Batteries B, D, E, and F, respectively, and not included in battery totals.
 * No record.

TABLE 9.—Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.

NEW YORK—Continued.

Organization.	Station.	Strength at inspection.			Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).						Action taken by Division of Militia Affairs as result of inspection.		
		Officers.		Enlisted men.		Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.			
		Present.	Absent.	Total.	Present.	Absent.	Total.	Number.	Average actual attendance.	Number.		Average actual attendance.	Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).
Twelfth Infantry:	New York.	7		7	6		6						Placed on probation. Do. Do. Do. Do. Do. Do. Do. Do. Do.
Field officers, etc.	do.	3		3	24	1	25	2	29	28	29	2	
Headquarters company.	do.												
Band section.	do.												
Machine-gun company.	do.	1		1	2		2	1	9	28	9		
Supply company.	do.	3		3	50	1	51	2	51	27	49	13	
Company A.	do.	1		1	43	2	45	2	47	36	49	9	
Company B.	do.	2		2	38	2	38	1	42	37	41	14	
Company C.	do.	2		2	65	2	65	2	49	36	53	30	
Company D.	do.	2		2	38		38	2	48	36	49	19	
Company E.	do.	1		1	38	3	41	1	52	35	43	22	
Company F.	do.	3		3	50		50	1	51	35	43	30	
Company G.	do.	3		3	61		61	2	51	35	43	29	
Company H.	do.	2		2	52	2	54	1	45	35	37	23	
Company I.	do.	2		2	44	1	45	1	52	35	40	21	
Company K.	do.	2		2	40	4	44	1	47	35	69	16	
Company L.	do.	3		3	64		64	1	48	35	40	19	
Company M.	do.	2		2	42		42	1	28	35			
Total.		39	16	633	617			474	621		594	247	
Fourteenth Infantry:	Brooklyn.	6	1	7								1	
Field officers, etc.	do.	4		4	6		6						
Headquarters company.	do.				2		2			30	12		
Band section.	do.												

Thirteenth Coast Defense Command—													
Headquarters.....	Brooklyn	10	10	5	5	27	27	5	5	27	27	5	5
Band.....	do	3	3	27	27	79	79	15	15	43	43	20	41
First Company.....	do	3	3	79	79	96	96	15	15	85	85	20	87
Second Company.....	do	2	2	53	53	1	1	15	15	93	93	31	81
Third Company.....	do	3	3	88	88	1	1	15	15	50	50	31	44
Fourth Company.....	do	3	3	54	54	1	1	15	15	103	103	31	75
Fifth Company.....	do	3	3	54	54	1	1	15	15	57	57	31	57
Sixth Company.....	do	2	2	52	52	1	1	15	15	65	65	31	63
Seventh Company.....	do	3	3	94	94	3	3	15	15	93	93	24	68
Eighth Company.....	do	3	3	65	65	1	1	15	15	70	70	34	63
Ninth Company.....	do	3	3	52	52	1	1	15	15	54	54	30	52
Tenth Company.....	do	3	3	58	58	2	2	15	15	52	52	31	60
Eleventh Company.....	do	2	2	59	59	3	3	15	15	58	58	33	44
Twelfth Company.....	do	3	3	60	60	1	1	15	15	60	60	30	51
Total.....		43	43	830	830	18	18	848	848	583	583	786	390
First Infantry:													
Field officers, etc.....	Binghamton	7	7	16	16	3	3	19	19	17	17	26	13
Headquarters company.....	do	2	2	16	16	2	2	18	18	17	17	26	13
Band section.....	do	2	2	3	3	5	5	3	3	3	3	25	1
Machine-gun company.....	do	3	3	62	62	13	13	67	67	69	69	27	19
Supply company.....	do	3	3	66	66	16	16	66	66	70	70	31	13
Company A.....	Utica	3	3	51	51	6	6	64	64	58	58	28	67
Company B.....	do	2	2	44	44	2	2	57	57	50	50	25	9
Company C.....	Watertown	3	3	55	55	3	3	50	50	44	44	25	21
Company D.....	Ogdensburg	3	3	44	44	3	3	53	53	51	51	30	24
Company E.....	Newburg	3	3	52	52	2	2	54	54	39	39	27	17
Company F.....	Walton	3	3	56	56	5	5	67	67	51	51	31	37
Company G.....	Oneonta	3	3	62	62	2	2	59	59	65	65	30	24
Company H.....	Binghamton	3	3	63	63	9	9	59	59	61	61	31	10
Company I.....	Middletown	2	2	50	50	1	1	60	60	58	58	32	41
Company J.....	Malone	3	3	60	60	4	4	67	67	75	75	35	76
Company K.....	Newburg	3	3	63	63	2	2	59	59	62	62	30	12
Company L.....	do	3	3	59	59	1	1	60	60	60	60	33	40
Company M.....	Mohawk	3	3	60	60	3	3	60	60	60	60	30	51
Total.....		47	47	609	609	68	68	767	767	81	81	603	381
Second Infantry:													
Field officers, etc.....	Troy	5	5	26	26	1	1	26	26	19	19	24	8
Headquarters company.....	do	4	4	26	26	1	1	26	26	19	19	24	8
Band section.....	do	2	2	2	2	2	2	2	2	7	7	24	7
Machine-gun company.....	do	3	3	62	62	3	3	62	62	55	55	29	10
Supply company.....	do	2	2	66	66	3	3	69	69	75	75	26	14
Company A.....	Cohoes	2	2	57	57	4	4	59	59	64	64	32	8
Company B.....	Troy	2	2	55	55	2	2	78	78	77	77	35	41
Company C.....	do	3	3	76	76	2	2	67	67	66	66	32	15
Company D.....	Schenectady	3	3	63	63	4	4	67	67	66	66	32	19
Company E.....	do	3	3	63	63	4	4	67	67	66	66	32	19
Company F.....	do	3	3	63	63	4	4	67	67	66	66	32	19

Placed on probation.

Do.
Do.
Do.
Do.
Do.
Do.
Do.
Do.
Do.
Do.

Do.
Do.
Do.

NORTH CAROLINA.

and.

Chief: Gov. Locke Craig. Adjutant
address, Raleigh. Inspector-Instructors:
Cavalry—Capt. Creed Y. Cox, Cavalry;
Coast Artillery Corps; Medical Corps—

Table of organization.

ford): First, Second, and Third Infantry.

to Sixth Companies, inclusive.

Company No. 1; Field Hospital, No. 1; 3 detachments.

Organization.	Station.	Strength at inspection.				Instruction during year ended Dec. 31, 1915 (sec. 15, militia law).						Action taken by Division of Militia Affairs as result of inspection.	
		Officers.		Enlisted men.		Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.			Number not actually present at times for drill and instruction (exclusive of field or camp service for instruction).
		Present.	Absent.	Total.	Present.	Absent.	Total.	Number.	Average actual attendance.	Number.	Average actual attendance.		
Chief officers of the line.....	Oxford.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Adjutant General's Department.....	Raleigh.....	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Inspector General's Department.....	do.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Advocate General's Department.....	do.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Master Sergeant.....	do.....	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Finance Department.....	do.....	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Local Department:													
Ambulance Company No. 1.....	Canton.....	5	.....	5	37	2	.....	.....	48	23	37	23	.....
Field Hospital No. 1.....	Asheville.....	2	.....	2	21	11	.....	.....	30	48	16	21	.....
Detachments—													
First Infantry.....	Rutherfordton.....	4	.....	4	16	3	.....	.....	.....	30	13	13	.....
Second Infantry.....	New Bern.....	3	1	4	16	.....	.....	.....	20	24	25	13	.....
Third Infantry.....	Reidsville.....	1	.....	1	16	6	.....	.....	(1)	39	18	13	.....
Medical Corps.....	.....	9	.....	9	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	.....	24	1	25	106	28	129	.....	103	.....	98	81	.....

: No record.

: Not serving with troops.

TABLE 9.—*Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.*

NORTH CAROLINA—Continued.

Organization.	Station.	Strength at inspection.			Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).				Action taken by Division of Militia Affairs as result of inspection.				
		Officers.		Enlisted men.		Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.		Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).	
		Present.	Absent.	Total.	Present.	Absent.	Total.	Number.		Average actual attendance.	Number.		Average actual attendance.
Cavalry:													
Troop A.....	Lincolnton.....	3	.....	3	52	5	57	{ (1) (2) (3) (4) (5)}	{ (1) (2) (3) (4) (5)}	{ (1) (2) (3) (4) (5)}	{ (1) (2) (3) (4) (5)}	.....	36
Troop B.....	Asheville.....	3	.....	3	36	13	49	{ (1) (2) (3) (4) (5)}	{ (1) (2) (3) (4) (5)}	{ (1) (2) (3) (4) (5)}	{ (1) (2) (3) (4) (5)}	.....	36
Total.....	.....	6	.....	6	88	18	106	{ (1) (2) (3) (4) (5)}	{ (1) (2) (3) (4) (5)}	{ (1) (2) (3) (4) (5)}	{ (1) (2) (3) (4) (5)}	.....	36
Coast Artillery Corps:													
Headquarters.....	Greensboro.....	3	1	4	2	.....	2	.....	.....	.....	.....	.....	.....
First Company.....	Raleigh.....	3	.....	3	69	.....	69	.....	.....	.....	.....	.....	45
Second Company.....	Wilmington.....	3	.....	3	51	2	53	.....	.....	.....	.....	.....	15
Third Company.....	Greensboro.....	3	.....	3	48	7	55	.....	.....	.....	.....	.....	2
Fourth Company.....	Salisbury.....	1	.....	1	40	36	76	.....	.....	.....	.....	.....	(?) 27
Fifth Company.....	Charlotte.....	3	.....	3	44	6	50	.....	.....	.....	.....	.....	11
Sixth Company.....	Hendersonville.....	3	.....	3	43	22	65	.....	.....	.....	.....	.....	.....
Total.....	.....	19	1	20	297	73	370	.....	.....	.....	.....	.....	100
First Infantry:													
Field officers, etc.....	Shelby.....	7	.....	7	.....	.....	.....	.....	.....	.....	.....	.....	.....
Headquarters company.....	.....do.....	4	.....	4	6	.....	6	.....	.....	.....	.....	.....	.....
Band section.....	.....do.....	.....	.....	.....	20	6	26	.....	.....	.....	.....	.....	.....

NORTH CAROLINA.

Table of organization.

State designation: North Carolina National Guard.
 State headquarters: Raleigh. Commander in chief: Gov. Locke Craig. Adjutant General: Brig Gen. Laurence W. Young; address, Raleigh. Inspector-Instructor: Infantry—Maj Henry J. Hunt, Infantry; Cavalry—Capt. Creed V. Cox, Cavalry; Coast Artillery—Maj. Alexander Greig, Jr., Coast Artillery Corps; Medical Corps—Lieut. Col. Henry Faga, Medical Corps.

First Brigade (headquarters, Oxford): First, Second, and Third Infantry.
 Unattached:

No. 1; 3 detachments.

Organization.	Station.	Strength at inspection.			Instruction during year ended Dec. 31, 1915 (sec. 15, militia law).								Action taken by Division of Militia Affairs as result of inspection.
		Officers.		Enlisted men.		Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.		Number not actually present at times for drill and instruction (exclusive of field or camp service for instruction).	
		Present.	Absent.	Total.	Present.	Absent.	Total.	Number.	Average actual attendance.	Number.	Average actual attendance.		
General officers of the line.....	Oxford.....	1	1	2	1	1	2	Not serving with troops.
Adjutant General's Department.....	Raleigh.....	1	1	2	1	1	2	.....	.....	.....	.....	.....
Inspector General's Department.....	do.....	1	1	2	1	1	2	.....	.....	.....	.....	.....
Judge Advocate General's Department.....	do.....	1	1	2	1	1	2	.....	.....	.....	.....	.....
Quartermaster Corps.....	do.....	2	2	4	2	2	4	.....	.....	.....	.....	.....
Ordnance Department.....	do.....	2	2	4	2	2	4	.....	.....	.....	.....	.....
Medical Department:													
Ambulance Company No. 1.....	Canton.....	2	2	4	27	3	30	.....	.....	23	27	22
Field Hospital No. 1.....	Asheville.....	2	2	4	21	11	32	.....	.....	43	18	21
Detachments—													
First Infantry.....	Rutherfordton.....	4	.....	4	16	3	19	.....	.....	30	12	13
Second Infantry.....	New Bern.....	3	1	4	16	.....	16	.....	.....	24	12	13
Third Infantry.....	Reidsville.....	1	.....	1	16	8	24	.....	.....	20	12	15
Medical Corps ¹.....	.....	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	24	1	25	106	20	126	102	96	61

¹ No record.

² Not serving with troops.

and absent from the inspections held in accordance with section 14 of section 18 of the militia law, and the action taken by the Division of

withdrew.

Instruction during year ended Dec. 31, 1918 (1918, militia law).									
Number.	Consecutive days on practice march.		Consecutive days in camp for instruction.		Assemblies for drill and instruction.		Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).		Action taken by Division of Militia Affairs as result of inspection.
	Average actual at- tendance.	Number.	Average actual at- tendance.	Number.	Average actual at- tendance.	Number.	Average actual at- tendance.	Number.	
1	51	8	55	46	35	16	16	16	Recognition with- drawn.
1	34	8	54	39	26	51	14	14	
2	46	8	55	34	49	31	33	33	Recognition with- drawn.
2	48	8	46	31	24	47	15	15	
3	48	8	59	70	47	448	376	376	Recognition with- drawn.
3	50	8	56	61	47	1,761	1,116	1,116	
494	494	695	695	448	376	376	376	376	Recognition with- drawn.
1,399	1,399	2,502	2,502	1,761	1,116	1,116	1,116	1,116	

Table of organization.

First Infantry.
Troops: 1 detachment.

Organization.	Station.	Strength at inspection.			Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).						Action taken by Division of Militia Affairs as result of inspection.	
		Enlisted men.			Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.			
		Officers.	Total.		Present.	Absent.	Total.	Number.	Average actual attendance.	Number.	Average actual attendance.	Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).
			Present.	Absent.								
Adjutant General's Department.	Bismarck.	1	1									
Inspector General's Department.	do.	1	1									
Quartermaster Corps.	do.	1	1									
Medical Department:												
Detachment Hospital Corps.	Lisbon.	4	4	23	1	24		12	23	36	17	4
First Infantry:												
Field officers, etc.	Grafton.	6	7									6
Headquarters company.	Lisbon.	3	3	5	1	6		12	23	(1)	(1)	9
Band section.	Fargo.			27		24		10	43	45	28	9
Machine-gun company.	Grand Forks.	2	2	23	1	24		12	5			6
Supply company.	Fargo.	3	3	2	1	3		11	43	35	36	(1)
Company A.	Bismarck.	3	3	58	6	64		10	40	55	24	43
Company B.	Fargo.	3	3	55	6	61		11	54	37	44	43
Company C.	Grafton.	3	3	65	1	66		11				
Company D.	Minot.	3	3	70	3	73		11	55	30	38	14
Company E.	Williston.	3	3	56	7	63		11	33	46	29	
Company F.	Mandan.	3	3	48	7	55						
Company G.	Valley City.	3	3	48	7	55	6	10	43	43	29	9
Company H.	Jamestown.	3	3	59		59	3	11	37	51	33	
Company I.	Wahpeton.	3	3	56		56		10	38	38	25	50
Company K.	Dickinson.	3	3	47	3	50		11	39	52	20	33
Company L.	Hillsboro.	3	3	35	4	39		10	40	64	20	13
Company M.	Grand Forks.	3	3	53	2	55				5	52	
Total.		50	51	717	49	766			493		378	235
Aggregate inspected.		55	58	740	50	790			516		395	239
Aggregate recognized.		52	55	692	43	735						

1 No record.

Detachments—										Not serving with troops.										Mounted.										Dismounted.									
Corps of Engineers—										Signal Corps:										Cavalry:										Medical Corps:									
First Squadron Cavalry—										First Battalion—										First Squadron—										First Battalion—									
First Battalion Field Ar-										Headquarters—										Headquarters—										Headquarters—									
tillery.										Band.										Troop A.										Troop B.									
First Infantry.										Company A.										Troop C.										Troop D.									
Second Infantry.										Company B.										Troop E.										Troop F.									
Third Infantry.										Company C.										Troop G.										Troop H.									
Fourth Infantry.										Company D.										Troop I.										Troop J.									
Fifth Infantry.										Company E.										Troop K.										Troop L.									
Sixth Infantry.										Company F.										Troop M.										Troop N.									
Seventh Infantry.										Company G.										Troop O.										Troop P.									
Eighth Infantry.										Company H.										Troop Q.										Troop R.									
Ninth Separate Battalion										Company I.										Troop S.										Troop T.									
of Infantry.										Company J.										Troop U.										Troop V.									
Medical Corps.										Company K.										Troop W.										Troop X.									
Total.										Total.										Total.										Total.									
Cleveland	1	1	1	3	5	10	23	16	15	15	14	13	14	16	7	56	345	10	335	59	178	123	9	1	1	1	3	4	3	3	15	59	335	10	345	56	391	233	180
do.	1	1	1	3	5	10	23	16	15	15	14	13	14	16	7	56	345	10	335	59	178	123	9	1	1	1	3	4	3	3	15	59	335	10	345	56	391	233	180
Akron	1	1	1	3	5	10	23	16	15	15	14	13	14	16	7	56	345	10	335	59	178	123	9	1	1	1	3	4	3	3	15	59	335	10	345	56	391	233	180
Cincinnati	1	1	1	3	5	10	23	16	15	15	14	13	14	16	7	56	345	10	335	59	178	123	9	1	1	1	3	4	3	3	15	59	335	10	345	56	391	233	180
Spencerville	1	1	1	3	5	10	23	16	15	15	14	13	14	16	7	56	345	10	335	59	178	123	9	1	1	1	3	4	3	3	15	59	335	10	345	56	391	233	180
Dayton	1	1	1	3	5	10	23	16	15	15	14	13	14	16	7	56	345	10	335	59	178	123	9	1	1	1	3	4	3	3	15	59	335	10	345	56	391	233	180
Delaware	1	1	1	3	5	10	23	16	15	15	14	13	14	16	7	56	345	10	335	59	178	123	9	1	1	1	3	4	3	3	15	59	335	10	345	56	391	233	180
Cleveland	1	1	1	3	5	10	23	16	15	15	14	13	14	16	7	56	345	10	335	59	178	123	9	1	1	1	3	4	3	3	15	59	335	10	345	56	391	233	180
Toledo	1	1	1	3	5	10	23	16	15	15	14	13	14	16	7	56	345	10	335	59	178	123	9	1	1	1	3	4	3	3	15	59	335	10	345	56	391	233	180
Zanesville	1	1	1	3	5	10	23	16	15	15	14	13	14	16	7	56	345	10	335	59	178	123	9	1	1	1	3	4	3	3	15	59	335	10	345	56	391	233	180
Akron	1	1	1	3	5	10	23	16	15	15	14	13	14	16	7	56	345	10	335	59	178	123	9	1	1	1	3	4	3	3	15	59	335	10	345	56	391	233	180
Toledo	1	1	1	3	5	10	23	16	15	15	14	13	14	16	7	56	345	10	335	59	178	123	9																

Company K.....	Batavia.....	3	.....	3	45	637	30	667	.....	.....	.....	8	60	51	39	11	Do.
Company L.....	Manchester.....	2	.....	2	78	.....	.....	73	.....	.....	.....	8	108	51	37	44	Do.
Company M.....	Georgetown.....	3	.....	3	51	.....	5	56	.....	.....	.....	8	72	51	42	21	Do.
Total.....	.....	43	2	45	637	667	30	667	35	.....	.....	.....	842	.....	397	274	
Second Infantry:																	
Field officers, etc.....	Lima.....	6	.....	6	.....	.....	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	Headquarters company
Headquarters company.....	Van Wert.....	3	1	4	5	.....	.....	21	.....	.....	.....	8	33	50	29	48	less band section,
	do.....	2	.....	.....	20	.....	1	47	.....	.....	.....	8	52	29	19	.....	placed on probation.
Band section.....	Ada.....	3	.....	3	43	.....	4	1	.....	.....	.....	8	(1)	.....	.....	.....	Do.
Machine-gun company.....	Lima.....	3	.....	3	1	.....	.....	53	.....	.....	.....	8	52	.....	25	33	Do.
Supply company.....	Findlay.....	3	.....	3	42	.....	11	53	.....	.....	.....	8	59	51	38	18	
Company A.....	Paulding.....	2	.....	2	52	.....	1	51	.....	.....	.....	8	55	50	26	16	
Company B.....	Lima.....	3	.....	3	51	.....	.....	43	.....	.....	.....	8	57	50	35	7	Do.
Company C.....	Van Wert.....	3	.....	3	43	.....	.....	44	.....	.....	.....	8	52	50	23	15	Do.
Company D.....	Hicksville.....	3	.....	3	40	.....	4	48	.....	.....	.....	8	50	51	33	14	Do.
Company E.....	Spencerville.....	3	.....	3	48	.....	.....	52	.....	.....	.....	8	47	50	24	25	Do.
Company F.....	Ada.....	2	.....	3	51	.....	1	45	.....	.....	.....	8	52	50	35	20	Do.
Company G.....	Bowling Green.....	3	.....	3	45	.....	.....	68	.....	.....	.....	8	66	51	53	7	Do.
Company H.....	Kenton.....	3	.....	3	68	.....	.....	47	.....	.....	.....	8	(1)	59	36	16	Do.
Company I.....	St. Marys.....	2	.....	2	39	.....	8	51	.....	.....	.....	8	58	55	32	12	Do.
Company K.....	Sycamore.....	3	.....	3	49	.....	2	56	.....	.....	.....	8	61	52	33	21	Do.
Company L.....	Ottawa.....	3	.....	3	53	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Company M.....	.....	47	2	49	650	685	35	685	40	.....	.....	.....	694	.....	441	250	
Total.....	.....	47	2	49	650	685	35	685	40	.....	.....	.....	694	.....	441	250	
Third Infantry:																	
Field officers, etc.....	Dayton.....	6	1	7	.....	.....	.....	5	.....	.....	.....	.....	.....	.....	.....	1	Do.
Headquarters company.....	do.....	3	.....	3	5	.....	.....	30	.....	.....	.....	.....	.....	51	27	15	Do.
Band section.....	do.....	2	.....	2	30	.....	.....	45	.....	.....	.....	.....	.....	26	20	8	Do.
Machine-gun company.....	do.....	3	.....	3	45	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	Do.
Supply company.....	do.....	3	.....	3	2	.....	.....	31	.....	.....	.....	.....	.....	.....	.....	.....	Do.
Company A.....	Covington.....	3	.....	3	29	.....	2	41	.....	.....	.....	.....	.....	51	26	10	Do.
Company B.....	Springfield.....	3	.....	3	35	.....	6	53	.....	.....	.....	.....	.....	52	27	15	Do.
Company C.....	Piqua.....	3	.....	3	53	.....	.....	45	.....	.....	.....	.....	.....	49	36	29	Do.
Company D.....	Urbana.....	3	.....	3	42	.....	3	48	.....	.....	.....	.....	.....	51	25	21	Do.
Company E.....	Hamilton.....	2	.....	2	37	.....	11	37	.....	.....	.....	.....	.....	52	20	23	Do.
Company F.....	Faton.....	2	.....	2	29	.....	8	51	.....	.....	.....	.....	.....	49	14	15	Do.
Company G.....	Dayton.....	3	.....	3	47	.....	4	27	.....	.....	.....	.....	.....	52	52	22	Do.
Company H.....	do.....	2	.....	2	27	.....	.....	55	.....	.....	.....	.....	.....	30	27	15	Recognition with-
																	drawn.
Company I.....	Xenia.....	3	.....	3	52	.....	3	55	.....	.....	.....	.....	.....	51	33	27	Do.
Company K.....	Dayton.....	3	.....	3	35	.....	2	37	.....	.....	.....	.....	.....	50	33	5	Placed on probation.
Company L.....	Sidney.....	3	.....	3	47	.....	.....	47	.....	.....	.....	.....	.....	51	27	22	Do.
Company M.....	Greenville.....	2	1	3	39	.....	.....	39	.....	.....	.....	.....	.....	52	26	29	Do.
Total.....	.....	46	2	48	554	593	39	593	65	.....	.....	.....	699	.....	392	257	

1 No record.

TABLE 9.—Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.

OHIO—Continued

Organization.	Station.	Strength at inspection.			Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).						Action taken by Division of Militia Affairs as result of inspection.		
		Officers.		Enlisted men.	Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.				
		Present.	Absent.		Total.	Number.	Average actual attendance.	Number.	Average actual attendance.	Number.		Average actual attendance.	
Fourth Infantry:	Columbus.....	6	0	6	Recognition with- drawn. Placed on probation. Recognition with- drawn. Placed on probation. Do. Recognition with- drawn.
	do.....	4	0	4	.....	.....	.....	.....	.....	.....	.....	.....
	do.....	28	28	0	.....	.....	.....	.....	.....	.....	.....	.....
	do.....	38	38	0	1	17	8	54	24	37	9	.....
	do.....	3	1	4	.....	.....	.....	.....	.....	.....	.....	.....
	Greenfield.....	2	42	42	(1)	(1)	8	48	51	53	5	.....
Company B.....	Columbus.....	8	42	42	2	26	8	51	48	20	27	.....
Company C.....	London.....	3	55	55	.....	.....	8	60	24	47	12	.....
Company D.....	Marion.....	3	41	41	.....	.....	8	58	51	28	24	.....
Company E.....	Marysville.....	3	45	45	.....	.....	8	54	51	43	7	.....
Company F.....	Circleville.....	3	60	60	.....	.....	8	72	61	41	11	.....
Company G (vacant).....	Chillicothe.....	3	56	56	.....	.....	8	60	51	56	.....	.....
Company H.....	Columbus.....	3	44	44	(1)	(1)	8	56	51	32	12	.....
Company I.....	Delaware.....	3	56	56	.....	.....	8	53	50	41	9	.....
Company J.....	Lancaster.....	3	51	51	2	41	8	56	50	28	26	.....
Company K.....	Washington Court-house.....	2	47	47	3	43	8	57	50	28	11	.....
Total.....	.....	46	612	612	.....	136	.....	721	.....	480	164	.....

Company K.....	2	.....	3	.....	48	.....	.....	.....	.....	8	60	51	39	11	Do.
Company L.....	2	.....	3	.....	73	.....	.....	.....	.....	8	108	51	37	44	Do.
Company M.....	3	.....	3	.....	56	.....	.....	.....	.....	8	72	51	42	21	Do.
Total.....	43	2	45	637	30	667	.....	35	.....	.....	842	.....	397	274	
Second Infantry:															
Field officers, etc.....	6	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Headquarters company less band section, placed on probation.
Headquarters company.....	3	1	4	5	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	Do.
Band section.....	.....	.....	.....	.....	.....	21	.....	.....	.....	.....	33	50	20	.....	Do.
Machine-gun company.....	2	.....	2	20	1	47	.....	.....	.....	.....	52	20	19	48	Placed on probation.
Supply company.....	3	.....	3	43	4	1	.....	.....	.....	.....	(1)	.....	.....	.....	Do.
Company A.....	3	.....	3	1	.....	53	.....	.....	.....	.....	52	51	25	33	Do.
Company B.....	2	.....	3	42	11	53	.....	.....	.....	.....	59	51	28	18	Do.
Company C.....	3	.....	3	52	1	53	.....	.....	.....	.....	55	50	26	15	Do.
Company D.....	3	.....	3	51	.....	51	.....	40	.....	.....	57	50	25	7	Do.
Company E.....	3	.....	3	43	.....	43	.....	.....	.....	.....	52	50	23	15	Do.
Company F.....	3	.....	3	40	4	44	.....	.....	.....	.....	50	51	33	14	Do.
Company G.....	3	.....	3	48	.....	48	.....	.....	.....	.....	47	50	24	25	Do.
Company H.....	2	1	3	51	1	52	.....	.....	.....	.....	52	50	25	20	Do.
Company I.....	3	.....	3	45	.....	45	.....	.....	.....	.....	56	51	53	7	Do.
Company K.....	3	.....	3	68	.....	68	.....	(1)	.....	.....	(2)	50	26	15	Do.
Company L.....	2	.....	2	30	8	47	.....	.....	.....	.....	53	50	33	12	Do.
Company M.....	3	.....	3	49	3	51	.....	.....	.....	.....	61	53	33	21	Do.
Ottawa.....	3	.....	3	53	3	56	.....	.....	.....	.....	.....	52	.....	.....
Total.....	47	2	49	650	35	685	.....	40	.....	.....	694	.....	441	250	
Third Infantry:															
Field officers, etc.....	6	1	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	Do.
Headquarters company.....	3	.....	3	5	.....	5	.....	.....	.....	.....	.....	.....	.....	15	Do.
Band section.....	.....	.....	.....	30	.....	30	.....	.....	.....	.....	.....	51	27	.....	Do.
Machine-gun company.....	2	.....	2	45	.....	45	.....	.....	.....	.....	.....	25	20	8	Do.
Supply company.....	3	.....	3	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	Do.
Company A.....	3	.....	3	20	.....	31	.....	.....	.....	.....	45	51	26	10	Do.
Company B.....	3	.....	3	25	6	41	.....	.....	.....	.....	46	52	27	15	Do.
Company C.....	3	.....	3	33	.....	53	.....	.....	.....	.....	62	49	26	20	Do.
Company D.....	3	.....	3	42	.....	45	.....	33	.....	.....	55	51	25	21	Do.
Company E.....	2	.....	2	37	11	48	.....	.....	.....	.....	55	52	20	23	Do.
Company F.....	2	.....	2	29	8	37	.....	.....	.....	.....	40	49	14	15	Do.
Company G.....	3	.....	3	47	4	51	.....	.....	.....	.....	65	52	52	22	Do.
Company H.....	2	.....	2	27	.....	27	.....	.....	.....	.....	51	30	27	15	Do.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Recognition with- drawn.
Company I.....	3	.....	3	52	3	55	.....	.....	.....	.....	53	51	33	27	Do.
Company K.....	3	.....	3	35	3	37	.....	.....	.....	.....	60	50	33	5	Placed on probation.
Company L.....	3	.....	3	47	.....	47	.....	.....	.....	.....	52	51	27	22	Do.
Company M.....	2	1	3	39	.....	39	.....	32	.....	.....	47	52	26	20	Do.
Total.....	46	2	48	564	39	593	.....	65	.....	.....	600	.....	392	257	

1 No record.

[illegible]

No record.

TABLE 9.—Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.

OKLAHOMA.

Guard.

Commander in chief: Gov. Robert L. Williams.
 Eap: address, Oklahoma City. Inspector-in-
 Charge: Murchison, Infantry; Cavalry—Capt. John

Table of organization.

Troops.

1; 1 detachment.

Organization.	Station.	Strength at inspection.				Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).						Action taken by Division of Militia Affairs as result of inspection.
		Officers.		Enlisted men.		Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.		Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).
		Present.	Absent.	Total.	Present.	Absent.	Total.	Number.	Average actual attendance.	Number.	Average actual attendance.	
Adjutant General's Department.	Oklahoma City.	1	1	1	1	1	1	1	1	1	1	1
Inspector General's Department.	do.	1	1	1	1	1	1	1	1	1	1	1
Judge Advocate General's Department.	do.	1	1	1	1	1	1	1	1	1	1	1
Quartermaster Corps.	do.	2	1	3	2	1	3	1	1	1	1	1
Ordnance Department.	do.	1	1	2	1	1	2	1	1	1	1	1
Medical Department:												
Field Hospital No. 1.	do.	4	1	5	28	4	33	3	15	12	35	20
Detachment Hospital Corps.	Dustin.	2	1	3	20	1	21	15	19	15	19	(1)
Medical Corps.	do.	2	1	3	20	1	21	15	19	15	19	(1)
Total.		9	1	10	49	5	54	15	15	54	54	20
Corps of Engineers:												
Company A.	Norman.	2	1	3	31	23	54	15	15	15	15	30

TABLE 9.—Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.

OREGON.

State designation: Oregon National Guard.	Infantry: Third Infantry.	Table of organization.
State headquarters: Portland. Commander in chief: Gov. James Withycombe. Adjutant General: Brig. Gen. George A. White; address, Portland.	Cavalry: Troop A.	
Inspector-instructor: Infantry—Lieut. Col. Ulysses G. McAlexander, Infantry. Cavalry—Capt. Kenyon A. Joyce, Cavalry; Field Artillery—Capt. Emery T. Smith, 11th Field Artillery; Coast Artillery—First Lieut. Willis Shippam, Coast Artillery Corps.	Field Artillery: Battery A.	
	Coast Artillery Corps: First to Eighth Companies, inclusive. Sanitary troops: 2 detachments.	

Field Artillery:	do.....	5	.....	5	77	16	93	.....	.....	.....	103	49	57	53
Battery A.....	Eugene.....	7	.....	7	3	3	6	.....	.....	.....	12	50	7	6
Coast Artillery Corps:	Portland.....	.....	.....	.....	23	.....	23	.....	.....	.....	22	46	15	9
Headquarters.....	Ashland.....	2	.....	2	45	19	64	.....	.....	.....	46	45	15	33
Band.....	Eugene.....	3	.....	3	64	1	65	.....	.....	.....	49	39	24	39
First Company.....	do.....	3	.....	3	68	1	69	.....	.....	.....	53	49	38	16
Second Company.....	Roseburg.....	3	.....	3	65	9	74	.....	.....	.....	55	46	37	25
Third Company.....	Albany.....	3	.....	3	68	.....	68	.....	.....	.....	52	39	28	14
Fourth Company.....	Cottage Grove.....	3	.....	3	66	3	69	.....	.....	.....	38	55	28	28
Fifth Company.....	Medford.....	3	.....	3	63	7	70	.....	.....	.....	67	34	44	35
Sixth Company.....	Portland.....	3	.....	3	57	.....	57	.....	.....	.....	41	41	31	23
Seventh Company.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Eighth Company.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	.....	30	.....	30	522	43	565	.....	.....	.....	435	.....	267	228
Third Infantry:	Portland.....	7	.....	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Field officers, etc.....	do.....	4	.....	4	6	.....	6	.....	.....	.....	.....	.....	.....	.....
Headquarters company.....	do.....	.....	.....	.....	28	.....	28	.....	.....	.....	.....	.....	.....	.....
Band section.....	do.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	12
Machine-gun company.....	do.....	3	.....	3	1	.....	1	.....	.....	.....	.....	.....	.....	.....
Supply company.....	do.....	3	.....	3	64	5	69	.....	.....	.....	.....	.....	.....	35
Company A.....	McMinnville.....	3	.....	3	71	.....	71	.....	.....	.....	.....	.....	.....	.....
Company B.....	Portland.....	3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Company C.....	do.....	3	.....	3	67	3	70	.....	.....	.....	.....	.....	.....	.....
Company D.....	do.....	3	.....	3	55	.....	55	.....	.....	.....	.....	.....	.....	.....
Company E.....	do.....	3	.....	3	47	7	54	.....	.....	.....	.....	.....	.....	.....
Company F.....	do.....	2	.....	2	63	2	65	.....	.....	.....	.....	.....	.....	.....
Company G.....	do.....	3	.....	3	43	4	47	.....	.....	.....	.....	.....	.....	.....
Company H.....	Oregon City.....	3	.....	3	61	2	63	.....	.....	.....	.....	.....	.....	.....
Company I.....	Portland.....	2	.....	2	87	3	90	.....	.....	.....	.....	.....	.....	.....
Company J.....	Woodburn.....	2	.....	2	64	.....	64	.....	.....	.....	.....	.....	.....	.....
Company K.....	Corvallis.....	1	.....	1	54	.....	54	.....	.....	.....	.....	.....	.....	.....
Company L.....	Dallas.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Company M.....	Salem.....	3	.....	3	101	1	102	.....	.....	.....	.....	.....	.....	.....
Total.....	.....	45	.....	45	812	27	839	.....	.....	.....	735	.....	467	304
Aggregate inspected and recognized.	.....	94	2	96	1,505	90	1,595	.....	.....	.....	1,304	.....	813	646

Placed on probation.

• Dismounted.

• No record.

• Not serving with troops.

TABLE 9.—Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.

PENNSYLVANIA.

Table of organization.

(Division: Headquarters, Wilkes-Barre.)

Second, and Third Infantry
Sixteenth, and Eighteenth Infantry.
and Thirteenth Infantry; Separate

detachments.

fourth, Sixth, and Eighth Infantry.

Organization.	Station.	Strength at inspection.						Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).						Action taken by Division of Militia Affairs as result of inspection.	
		Officers			Enlisted men.			Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.			Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).
		Present.	Absent.	Total.	Present.	Absent.	Total.	Number.	Average actual attendance.	Number.	Average actual attendance.	Number.	Average actual attendance.		
General officers of the line.....	(1)	4	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Adjutant General's Department.....	Harrisburg.....	7	.....	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Inspector General's Department.....	do.....	2	4	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Judge Advocate General's Department.....	do.....	5	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Quartermaster Corps.....	do.....	22	3	24	10	.....	10	.....	.....	.....	.....	.....	.....	.....
Ordnance Department.....	do.....	5	.....	5	4	.....	4	.....	.....	.....	.....	.....	.....	.....

TABLE 9.—*Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.*

PENNSYLVANIA—Continued.

[illegible]

[illegible]

TABLE 9.—Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.

PENNSYLVANIA—Continued.

Organization.	Station.	Strength at inspection.			Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).						Action taken by Division of Militia Affairs as result of inspection.										
		Enlisted men.			Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.												
		Present.	Absent.	Total.	Number.	Average actual attendance.	Number.	Average actual attendance.	Number.	Average actual attendance.											
Third Infantry—Continued.	Philadelphia.....	3		3																	
Company I.....	do.....	2		2																	
Company K.....	do.....	2		2																	
Company L.....	do.....	3		3																	
Company M.....	do.....																				
Total.....		45		45																	
Fourth Infantry:																					
Field officers, etc.....	Columbia.....	6	1	7																	
Headquarters company.....	Allentown.....	4		4																	
Band section.....	Lancaster.....																				
Machine-gun company.....	Allentown.....	2		2																	
Supply company.....	do.....	3		3																	
Company A.....	Reading.....	3		3																	
Company B.....	Allentown.....	3		3																	
Company C.....	Columbia.....	2		2																	
Company D.....	Allentown.....	3		3																	
Company E.....	Hamburg.....	3		3																	
Company F.....	Pottsville.....	3		3																	
Company G.....	Pine Grove.....	3		3																	
Company H.....	Lebanon.....	3		3																	
Company I.....	Reading.....	3		3																	
Company K.....	Lancaster.....	3		3																	

Company L.....	3	.....	3	47	.....	47	65	2	52	8	62	42	22	12
Company M.....	2	.....	2	58	7	65	.....	1	23	8	58	46	41	16
Total.....	49	1	50	677	64	741	.....	.....	188	.....	766	.....	412	301
Sixth Infantry:														
Field officers, etc.....	7	.....	7	.....	.....	.....	6	.....	.....	.....	.....	.....	.....	7
Headquarters company.....	4	.....	4	6	.....	28	.....	.....	.....	8	28	19	25	34
Band section.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Machine-gun company.....	1	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Supply company.....	3	.....	3	2	.....	2	.....	.....	.....	8	7	52	4	3
Company A.....	3	.....	3	55	6	61	.....	.....	.....	8	62	42	34	28
Company B.....	2	.....	2	54	6	60	.....	2	11	8	56	48	26	48
Company C.....	3	.....	3	65	2	67	.....	3	21	8	56	51	37	46
Company D.....	3	.....	3	54	11	65	.....	.....	.....	8	65	40	37	35
Company E.....	3	.....	3	47	18	65	.....	.....	.....	8	57	26	22	61
Company F.....	3	.....	3	52	12	64	.....	2	41	8	68	42	34	44
Company G.....	3	.....	3	48	17	65	.....	.....	.....	8	59	37	27	29
Company H.....	3	.....	3	48	17	65	.....	3	13	8	55	51	23	59
Company I.....	3	.....	3	56	8	64	.....	.....	.....	8	65	40	40	14
Company J.....	3	.....	3	49	16	65	.....	.....	.....	8	65	32	30	15
Company K.....	3	.....	3	53	12	65	.....	.....	.....	8	61	26	29	36
Company L.....	3	.....	3	65	2	67	.....	.....	.....	8	63	26	28	70
Company M.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	50	1	51	682	127	809	.....	.....	86	.....	767	.....	396	529
Eighth Infantry:														
Field officers, etc.....	7	.....	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Headquarters company.....	4	.....	4	23	2	25	.....	.....	.....	8	10	30	8	.....
Band section.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8	26	90	24	.....
Machine-gun company.....	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Supply company.....	3	.....	3	2	.....	2	.....	.....	.....	11	7	30	4	.....
Company A.....	2	.....	2	53	5	58	.....	.....	.....	8	46	40	29	53
Company B.....	3	.....	3	48	8	56	.....	.....	.....	8	58	38	28	46
Company C.....	3	.....	3	48	9	57	.....	2	38	8	56	52	31	29
Company D.....	3	.....	3	56	2	58	.....	.....	.....	8	59	51	14	34
Company E.....	3	.....	3	64	2	66	.....	2	41	8	52	35	27	56
Company F.....	3	.....	3	49	16	65	.....	.....	.....	8	64	60	33	23
Company G.....	3	.....	3	50	8	58	.....	.....	.....	8	59	36	36	33
Company H.....	3	.....	3	56	3	59	.....	.....	.....	8	62	47	30	38
Company I.....	3	.....	3	60	8	68	.....	.....	.....	8	67	54	24	47
Company J.....	2	.....	2	48	6	54	.....	.....	.....	8	60	39	33	24
Company K.....	3	.....	3	41	17	58	.....	.....	.....	8	53	48	25	10
Company L.....	3	.....	3	46	17	63	.....	.....	.....	8	67	45	21	40
Company M.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	50	.....	50	648	105	753	.....	.....	79	.....	746	.....	362	433

TABLE 9.—Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.

PENNSYLVANIA—Continued.

Organisation.	Station.	Strength at inspection.			Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).						Action taken by Division of Militia Affairs as result of inspection.			
		Officers.		Enlisted men.		Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.				
		Present.	Absent.	Total.	Present.	Absent.	Total.	Number.	Average actual attendance.	Number.		Average actual attendance.	Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).	
Ninth Infantry:														
Field officers, etc.	Wilkes-Barre	7		7										
Headquarters company	do.	4		4	4		4							
Band section	do.				24	3	27	8	42	55	33			
Machine-gun company	do.	1		1										
Supply company	do.	3		3	2		2	8	5	45	2	1		
Company A	do.	2		2	38	8	46	8	50	43	25	27		
Company B	do.	2		2	27	19	46	8	53	36	19	39		
Company C	do.	3		3	48	7	55	8	60	43	29	29		
Company D	Pittston	2		2	27	17	44	8	49	40	24	30		
Company E	Wilkes-Barre	3		3	36	9	45	8	41	40	15	36		
Company F	do.	2		2	31	11	42	8	42	42	23	19		
Company G	do.	2		2	56	9	65	8	64	44	39	44		
Company H	Hazleton	3		3	39	13	52	8	60	40	24	37		
Company I	Pittston	2		2	53	6	59	8	60	34	22	38		
Company K	Plymouth	2	1	3	35	9	44	8	47	45	24	41		
Company L	Wilkes-Barre	3		3	53	1	54	8	61	46	32	21		
Company M	Nanticoke	3		3	44	8	52	8	57	42	33	37		
	Pittston													
Total		44	1	45	517	120	637		601		344		399	
								81						

1100

REPORT OF THE CHIEF OF THE MILITIA BUREAU.

TABLE 9.—Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.

PENNSYLVANIA—Continued.

Organization.	Station.	Strength at inspection.			Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).						Action of Militia Affairs as result of inspection.			
		Officers.		Enlisted men.		Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.				
		Present.	Absent.	Total.	Present.	Absent.	Total.	Number.	Average actual attendance.	Number.		Average actual attendance.	Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).	
Sixteenth Infantry:														
Field officers, etc.	Oil City.....	4		4										
Headquarters company	do.....	4		4										
Band section	do.....				26	2	28			8	43	47	23	36
Machine-gun company	do.....	2		2										
Supply company	do.....	3		3										7
Company A	Corry.....	3		3	67	6	73			8	57	42	32	45
Company B	do.....	3		3	54	12	66			8	66	40	35	46
Company C	Meadville.....	3		3	49	16	65			8	70	48	35	42
Company D	Bradford.....	3		3	40	25	65			8	45	49	29	38
Company E	Oil City.....	2		2	55	7	62			8	61	67	26	40
Company F	Kane.....	3		3	32	17	49			8	53	45	31	27
Company F	Franklin.....	3		3										
Company G	Erie.....	3		3	45	21	66			8	60	40	28	51
Company H	Ridgway.....	3		3	39	26	65			8	45	53	17	56
Company I	Warren.....	3		3	30	16	46			8	50	48	26	31
Company K	Kittanning.....	3		3	44	17	61			8	65	43	20	57
Company L	Butler.....	1		1	39	26	65			8	53	47	31	50
Company M	Grove City.....	3		3	38	24	62			8	55	41	21	48
Total.....		46		46	564	215	779		103		722		354	574

Recognition with-
drawn.
Placed on probation.
Do.
Recognition with-
drawn.
Placed on probation.

Eighteenth Infantry:									
Field officers, etc.	7	7	6	5	28	6	2	5	1
Headquarters company	4	4	23	6	28	6	2	5	34
Band section	1	1	2	2	2	2	2	2	
Machine-gun company	3	3	47	31	78	2	2	5	
Supply company	2	2	41	22	63	2	2	11	67
Company A	2	2	47	16	63	2	2	15	55
Company B	3	3	33	31	64				53
Company C	2	2	54	8	62				53
Company D	2	2	42	18	60				47
Company E	2	2	51	8	59				47
Company F	3	3	36	21	57				34
Company G	3	3	47	13	60				45
Company H	2	2	53	8	61				48
Company I	3	3	54	12	66				48
Company K	3	3	62	3	65				62
Company L	3	3							53
Company M	44	44	598	196	794			96	649
Total									
Separate Battalion of Infantry:									
Headquarters	3	3	1	12	59	1			3
Company C	3	3	47	23	65				36
Company D	3	3	42	23					49
Company F	2	2	41	14	55				22
Company K	2	2	53	7	60				54
Sunbury	13	13	184	56	240				164
Total									
Aggregate inspected	708	732	8,318	1,809	10,127			1,744	5,852
Aggregate recognized	677	701	7,826	1,624	9,450				

1 No record.

TABLE 9.—Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.

RHODE ISLAND.

Table of organization.

Artillery District (First to Seventeenth Companies, in-
Company No. 1; 1 detachment.

Organization.	Station.	Strength at inspection.				Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).								Action taken by Division of Militia Affairs as result of inspection.	
		Officers.		Enlisted men.		Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.		Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).			
		Present.	Absent.	Total.	Present.	Absent.	Total.	Number.	Average actual attendance.	Number.	Average actual attendance.		Number.		Average actual attendance.
Providence.....	Providence.....	1	1	2	1	1	2	.....	.....	.....	.....	.....	.....	.....	.....
do.....	do.....	1	1	2	1	1	2	.....	.....	.....	.....	.....	.....	.....	.....
do.....	do.....	1	1	2	1	1	2	.....	.....	.....	.....	.....	.....	.....	.....
do.....	do.....	1	1	2	1	1	2	.....	.....	.....	.....	.....	.....	.....	.....
do.....	do.....	1	1	2	1	1	2	.....	.....	.....	.....	.....	.....	.....	.....
Ordnance Department.....	do.....	3	45	48	45	3	48	.....	.....	11	42	46	28	30	.....
Medical Department: Ambulance Company No. 1.....	do.....	2	20	22	20	1	21	.....	.....	.....	.....	.....	.....	24	.....
Detachment— Coast Artillery Corps.....	do.....	2	1	3	2	1	3	.....	.....	.....	.....	.....	.....	.....	.....
Medical Corps.....	do.....	2	1	3	2	1	3	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	.....	8	66	74	66	3	69	.....	.....	.....	43	.....	28	62	.....

Cavalry: Troop A..... Troop B..... Troop C..... Total..... Field Artillery: Battery A.....	Provence..... do..... do.....	3 3 3	2 2 2	59 67 68	4 3 4	66 70 67	3 3 3	10 10 10	120 120 120	53 53 53	238 243 243	18 24 12
		8	2	189	11	200	34	10	120	53	2120	54
	Provence.....	5	5	150	1	157	7	10	120	53	109	3
	do.....	17	3	18	1	19	1	8	12	39	8	18
	do.....	2	2	28	2	28	2	8	27	37	21	6
	do.....	2	2	28	2	28	2	8	28	40	24	10
	do.....	2	2	53	4	57	4	8	55	40	34	17
	do.....	2	2	53	7	62	7	8	55	42	30	25
	do.....	2	2	62	9	71	9	8	55	41	39	34
	do.....	2	2	78	9	78	9	8	55	42	39	12
	do.....	2	2	49	9	58	9	8	55	42	42	18
	do.....	2	2	45	13	58	13	8	55	44	42	19
	do.....	2	2	45	4	59	4	8	55	39	50	19
	do.....	2	2	45	7	62	7	8	55	40	45	42
	do.....	2	2	38	21	59	21	8	55	39	50	20
	do.....	2	2	54	15	69	15	8	55	41	38	21
	do.....	2	2	47	21	68	21	8	55	41	38	21
	do.....	2	2	58	4	60	4	8	55	45	41	31
	do.....	2	2	50	4	42	4	8	44	41	38	21
	do.....	2	2	44	22	50	22	8	44	41	37	4
	do.....	2	2	44	6	50	6	8	44	44	44	35
	do.....	2	2	42	13	54	13	8	47	41	37	28
	do.....	2	2	42	13	54	13	8	47	40	25	26
Total.....		61	2	939	169	1,006	88	1,033	1,033	728	440	
Aggregate inspected and recognised.....		28	4	1,353	174	1,527	88	1,386	1,386	978	500	

* Mounted.

* Dismounted.

* Not serving with troops.

TABLE 9.—Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.

SOUTH CAROLINA.

Table of organization.

Richard I. Manning.
Columbia. Inspector-
Infantry; Coast Artil-

Organization.	Station.	Strength at inspection.			Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).						Action taken by Division of Militia Affairs as result of inspection.	
		Officers.			Enlisted men.		Consecutive days on practice march.		Consecutive days in camp service for instruction.			
		Present.	Absent.	Total.	Present.	Absent.	Number.	Average actual attendance.	Number.	Average actual attendance.		
Judge Advocate General's Department.	Columbia.....	1	1	2							Recognition withdrawn.	
Quartermaster Corps.	do.....	1	1	2								
Ordnance Department.	do.....	1	1	2								
Medical Department: Detachments—											Recognition withdrawn.	
First Infantry.	do.....	3	1	4	16	3	10		11	20		
Second Infantry.	do.....	3	1	4	21	1	22					
Medical Corps.		1		1							Recognition withdrawn.	
Total.		7	2	9	37	4	41					
Coast Artillery Corps: First Company.	Greenville.....	3		3	61	4	65					

First Infantry: Field officers, etc. Headquarters company. Band section. Machine-gun company. Supply company. Company A. Company B. Company C. Company D. Company E. Company F. Company G. Company H. Company I. Company K. Company L. Company M.	do.	5	1	4	2	6	11	37	90	18	5	
	do.	4	4	23	1	24	11					
	Williamston.											
	Greenville.	2	2				11	7				7
	Fort Mill.	3	3	1	1	2	11	69	66	45	27	
	Greenville.	3	3	75	3	78	11	58	34	56	35	
	Anderson.	3	3	58	15	73	11	60	60	57	28	
	Pelzer.	3	3	57	4	61	11	57	36	38	29	
	Laurens.	3	3	53	3	56	11	54	45	41	35	
	Union.	3	3	63	1	64	11	61	46	45	56	
	Spartanburg.	3	3	44	6	50	11	55	53	23	37	
	Fort Mill.	3	3	44	12	56	11	61	28	51	44	
	Rock Hill.	3	3	59	6	65	11	54	36	36	93	
	Cheraw.	3	3	56	3	59	11	39	30	37	22	
	Winnsboro.	1	1	54	5	59	11	48	53	33		
	Harsville.	3	3	44	5	49	11	45	25	43	5	
	Camden.	3	3	45	12	57	11					
	Total.	46	2	680	79	759		717		523	423	
Second Infantry: Field officers, etc. Headquarters company. Band section. Machine-gun company (vacant). Supply company. Company A. Company B. Company C. Company D. Company E. Company F. Company G. Company H. Company I. Company K. Company L. Company M.	Georgetown.	7										
	Orangeburg.	4		4	1	5	11	20	19	15		
	do.			22	1	23						
	Columbia.	3		1	1	2	11	5			5	
	Charleston.	2		58	7	65	11	44	39	46	7	
	do.	3		50	5	55	11	45	33	44	12	
	do.	2		51	9	60	11	42	32	35	27	
	do.	3		48	3	51	11	45	38	46	20	
	Columbia.	2	1	40	16	56	11	53	50	41	60	
	do.	3		43	22	65	11	43	63	32	21	
	do.	3		54	8	62	11	59	50	43	20	
	New Brookland.	2		56	20	76	11	59	55	(1)	(1)	
	Timmonsville.	3		45	11	56	11	47	33	45	29	
	Elloree.	1	1	43	15	58	11	53	27	42	72	
	Sumter.	3		47	14	61	11	57	28	51		
	Orangeburg.	3		45	17	62	8	41	24	51	17	
	Total.	44	2	607	150	757		613		491	290	
	Aggregate inspected.	104	10	1,385	237	1,622		1,350		1,021	754	
	Aggregate recognized.	95	7	1,236	188	1,424						

* Not serving with troops.

* No record.

Company C.....	3	.....	3	48	2	50	.....	.....	12	46	32	38	45	Do.
Company D.....	3	.....	3	39	16	55	.....	.....	12	46	42	25	38	Do.
Company E.....	3	.....	3	14	24	38	.....	.....	12	42	38	18	32	Do.
Company F.....	3	.....	3	68	5	73	.....	.....	12	45	37	46	50	
Company G.....	2	.....	2	47	4	51	(²)	(²)	12	42	42	20	53	Do.
Company H.....	3	.....	3	56	12	68	.....	.....	(²)	(²)	(²)	(²)	(²)	Do.
Company I.....	3	.....	3	38	5	43	.....	.....	12	44	32	38	26	Do.
Company K.....	3	.....	3	39	13	52	.....	.....	12	42	39	34	33	Do.
Company L.....	3	.....	3	32	29	61	.....	.....	12	43	48	27	42	Do.
Company M.....	3	.....	3	37	14	51	.....	.....	12	42	35	29	46	Do.
Total.....	49	1	50	568	141	709	.....	.....	.....	528	.....	346	507	
Separate Company A, Infantry.....	3	.....	3	56	7	63	.....	.....	.....	.....	8	38	66	Do.
Separate Company C, Infantry.....	3	.....	3	66	1	67	.....	.....	12	.....	22	28	70	Do.
Aggregate inspected and recognized.....	63	2	65	708	149	857	.....	18	.....	553	.....	429	644	

1 Not serving with troops.

2 No record.

[illegible]

1 Not serving with troops.

: Mounted.

• No record.

“Dismounted.

[illegible]

TABLE 9.—Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.

TEXAS—Continued.

Organization.	Station.	Strength at inspection.			Instruction during year ended Dec. 31, 1915 (sec. 15, militia law).				Action taken by Division of Militia Affairs as result of inspection.			
		Officers.		Enlisted men.		Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.		
		Present.	Absent.	Total.	Present.	Absent.	Total.	Number.		Average actual attendance.	Number.	Average actual attendance.
.....	Gainesville.....	6	1	7	4	3	6	.....	.....	.....	.....	7
.....	Fort Worth.....	3	1	4	.....	.....	.....	.....	.....	(1)	(1)	10
.....	Dallas.....	2	.....	2	49	10	59	.....	.....	48	22	6
.....	do.....	3	.....	3	3	.....	2	.....	15	(1)	(1)	5
.....	Fort Worth.....	3	.....	3	38	23	56	.....	.....	.....	.....	(1)
Company B.....	do.....	3	.....	3	40	26	66	.....	.....	50	21	45
Company C.....	Sherman.....	3	.....	3	34	2	36	.....	.....	30	16	34
Company D.....	Fort Worth.....	3	.....	3	44	18	62	.....	.....	54	20	14
Company E.....	Greenville.....	3	.....	3	29	30	59	.....	.....	56	24	31
Company F.....	Weatherford.....	3	.....	3	33	20	53	.....	.....	44	23	66
Company G.....	Dallas.....	1	2	3	70	4	74	.....	.....	46	23	56
Company H.....	Vernon.....	2	.....	2	63	8	71	.....	.....	(1)	(1)	(1)
Company I.....	Mineral Wells.....	3	.....	3	61	16	67	.....	.....	6	38	70
Company K.....	El Paso.....	3	.....	3	60	14	64	.....	.....	50	33	(1)
Company L.....	Plainview.....	3	.....	3	60	45	65	.....	.....	(1)	(1)	26
Company M.....	McKinney.....	3	.....	3	51	18	69	.....	.....	53	50	17
Total.....	.....	47	4	51	554	250	804	.....	17	.....	200	367
Aggregate inspected and recognized.	.....	153	32	185	1,760	900	2,720	.....	272	.....	631	1,306

1 No record.

TABLE 9.—Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.

UTAH—Continued.

Organization.	Station.	Strength at inspection.			Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).						Action taken by Division of Militia Affairs as result of inspection.	
		Officers.		Enlisted men.		Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.		
		Present.	Absent.	Total.	Present.	Absent.	Total.	Number.	Average actual attendance.	Number.		Average actual attendance.
First Battalion of Infantry:												
Headquarters.....	Salt Lake City..	4	.....	4	1	.....	1	.....	.....	.....	.....	.....
Band.....	Mount Pleasant..	.....	.....	.....	25	2	27	11	27	35	21	2
Company B.....	Ogden.....	3	.....	3	39	7	46	10	34	49	26	37
Company D.....	Mount Pleasant..	2	.....	2	44	11	55	10	43	41	37	25
Company F.....	Manti.....	3	.....	3	46	6	52	11	46	45	31	24
Company G.....	Ephraim.....	3	.....	3	65	.....	65	15	54	48	46	10
Total.....	.....	15	.....	15	220	26	246	.....	204	.....	161	98
Separate Company H, Infantry...	Salt Lake City..	3	.....	3	61	4	65	14	49	45	37	22
Aggregate inspected and recognized.....	.....	31	1	32	512	34	546	.....	399	.....	319	221

VERMONT.

Table of organization

now Charles W. Gates.
St. Albans. Inspector-
Cavalry—Capt David H.
Sanitary troops: 1 detachment.
James F. Hall, Medi-
cal Corps.

State designated
State headquar-
ters—Adjutant G.
Instructors: Biddle and
Medical Corps.

Organization.	Station.	Strength at inspection.			Instruction during year ended Dec. 31, 1915 (sec. 15, militia law).						Action taken by Division of Militia Affairs as result of inspection.	
		Enlisted men.			Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.			
		Present.	Absent.	Total.	Number.	Average actual attendance.	Number.	Average actual attendance.	Number.	Average actual attendance.		Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).
Adjutant General's Department.	St. Albans.	1		1								
Inspector General's Department.	do.	1		1								
Judge Advocate General's Department.	do.	1		1								
Quartermaster Corps.	do.	2		2								
Ordnance Department.	do.	1		1								
Medical Department: Detachment—												
First Infantry.	Burlington.	4		4	17		1	16	10	32	15	
Medical Corps ¹ .		2		2								
Total.		6		6	17		17	16	19		15	
Cavalry: First Squadron—												
Headquarters.	Northfield.	4		4	1		1 (3)	3 (3)	10 1/2	106 1/2	14 1/2	
									14	187	14	

¹Not serving with troops.

²Mounted.

³Dismounted.

Not serving with troops.

Mounted.

Dismounted.

Company E.....	3	.....	3	49	4	53	2	28	10	45	27	35	28	Placed on probation. Do.
Company F.....	3	.....	3	47	11	58	2	37	10	53	28	41	24	
Company G.....	3	.....	3	51	4	55	1	22	10	49	34	33	45	
Company H.....	3	.....	3	41	9	50	.....	.....	10	45	24	34	27	
Company I.....	2	.....	2	65	.....	65	.....	.....	10	50	30	28	.....	Recognition with drawn.
Company K.....	3	.....	3	52	13	65	.....	.....	10	36	16	30	65	
Company L.....	3	.....	3	63	2	65	.....	.....	10	40	42	25	61	Placed on probation.
Company M.....	3	.....	3	40	7	47	.....	.....	11	57	30	35	28	
Total.....	50	.....	50	665	70	735	.....	87	.....	632	.....	454	441	
Aggregate inspected.....	79	.....	79	845	98	943	.....	103	.....	771	.....	587	441	
Aggregate recognized.....	76	.....	76	793	85	878	.....	.....	.....	.....	.....	.....	.....

• Mounted.

• Dismounted.

• No record.

TABLE 9.—Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.

VIRGINIA.

Table of organization.

d Fourth Infantry.

Organization.	Station.	Strength at inspection.				Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).								Action taken by Division of Militia Affairs as result of inspection.
		Officers.		Enlisted men.		Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.		Number not actually present (exclusive of field or camp service for instruction).		
		Present.	Absent.	Total.	Present.	Absent.	Total.	Number.	Average actual attendance.	Number.	Average actual attendance.			
	Franklin.....	
	Richmond.....	
	do.....	
	do.....	
	do.....	4	1	5	1	1	
	do.....	1	
	do.....	
	do.....	
	do.....	
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Recognition with
drawn.
Do.

	3	1	4	10	2	3	13		8	11	43	3	10	Placed on probation. Recognition with- drawn.
Fourth Infantry.....														
R. L. I. B. Battalion.....														
Medical Corps.....	4		4											
Total.....	13	3	16	53	10	63				34		27	63	
Signal Corps:														
Field Company.....	3		3	54	8	62	1	41	30	69	53	46		Placed on probation.
Field Artillery:														
First Battalion--														
Headquarters.....	3		3	2		2						14		
Battery A.....	4	1	5	102	7	109	1	96			10	71	20	
Battery B.....	4		4	70	10	96	2	37	10	104	41	61	46	
Battery C.....	4	1	5	58	24	80	5	46			50	51	41	
Total.....	15	2	17	239	50	289		178		104		187	109	
Separate Battery D, Field Artillery.	5		5	105	38	143					2	120		
First Infantry:														
Norfolk.....	4	3	7											
do.....	3	1	4	4	1	5			8	4				
do.....				14	10	24								
do.....	2		3			2								
do.....	2		3	50	8	58				6			12	
do.....	2	1	3	53	13	66				42	45	38	13	
do.....	2		3	41	23	64				41	58	40	18	
Newport News.....	2		3	40	27	67				43	45	25	32	
Norfolk.....	2	1	3	57	9	66				38	50	39	17	
do.....	3		3	58		61				41	40	41	7	
Suffolk.....	3		3	25		58				50	52	45	6	
Norfolk.....	3		3	44	36	79					55	30	10	
Hingham.....	2		2							48	54	30	69	
Springs.....														
Franklin.....	3		3	47	31	68				52	59	42	24	
Portsmouth.....	3		3	50	26	75				71	68	25	26	
do.....	3		3	62	9	71	2	17		50	58	40	4	
Danville.....	3		3	56	20	78				64	50	45	15	
Total.....	43	6	49	508	225	838		17		551		440	250	
Second Infantry:														
Field officers, etc.....	5	2	7										7	
Headquarters company.....	3		3	5		6				6			8	
Band section (vacant).....														
Machine-gun company.....	1		1											
Supply company.....	2	1	3	1	1	2				6			6	

Not serving with troops.

TABLE 9.—Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.

VIRGINIA—Continued.

Organization.	Station.	Strength at inspection.			Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).						Action taken by Division of Militia Affairs as result of inspection.				
		Officers.		Enlisted men.		Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.		Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).			
		Present.	Absent.	Total.	Present.	Absent.	Total.	Number.	Average actual attendance.	Number.			Average actual attendance.		
Second Infantry - Continued.	Farmville.....	2	1	3	33	20	53						11	Placed on probation.	
Company A.....	Culpeper.....	2		2	55	13	68						56	Recognition with-drawn.	
Company B.....														Do.	
Company C.....	Warrenton.....	3		3	35	30	65						48	Placed on probation.	
Company D.....	Front Royal.....	3		3	55	26	81						24		
Company E.....	Chase City.....	3		3	60	12	72						1		
Company F.....	Roanoke.....	3		3	55	10	65						48		
Company G.....	Petersburg.....	1	1	2	44	14	58						14		
Company H.....	Big Stone Gap.....	3		3	38	29	67						30		
Company I.....	Winchester.....	3		3	42	17	59						35	Do.	
Company K.....	Strasburg.....	2		2	9	19	28						31	Recognition with-drawn.	
Company L.....	Pulaski.....	3		3	34	31	65						30	Placed on probation.	
Company M.....	Radford.....	3		3	44	22	66						44		
Total.....		42	5	47	510	244	754						393		
Fourth Infantry:	Norfolk.....	6		6											
Field officers, etc.....	do.....	4		4	4		4								
Headquarters company.....	do.....				13	12	25						18		
Band section.....	do.....														
Machine-gun company.....	do.....	2		2											
Supply company.....	do.....	3		3	2		2								

Company A.....	do.....	3	1	3	51	16	67	.....	.....	8	25	24	26	17
Company B.....	do.....	2	.....	3	41	18	59	.....	.....	15	30	36	24	39
Company C.....	Newport News..	3	.....	3	51	12	63	.....	.....	8	46	52	38	9
Company D.....	Norfolk.....	1	2	3	45	12	57	28	.....	8	26	24	36	21
Company E.....	do.....	3	.....	3	39	26	65	.....	.....	8	42	55	35	17
Company F.....	Suffolk.....	2	1	3	41	11	52	.....	.....	8	32	51	40	3
Company G.....	Norfolk.....	3	.....	3	41	15	56	38	.....	8	24	26	38	33
Company H.....	H i g h l a n d	1	2	3	26	31	57	32	.....	8	36	47	29	29
Company I.....	Springs.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Company J.....	Franklin.....	3	.....	3	25	34	59	.....	.....	8	37	46	33	26
Company K.....	Portsmouth.....	2	1	3	24	10	34	.....	.....	8	24	40	12	26
Company L.....	do.....	2	.....	2	30	13	43	.....	.....	8	35	50	21	3
Company M.....	Emporia.....	.....	1	1	22	33	55	.....	.....	8	29	35	26	27
Total.....	.....	40	8	48	455	243	698	98	.....	.....	421	.....	386	290
Richmond Light Infantry, Blues	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Battalion:	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Headquarters.....	Richmond.....	3	1	4	3	.....	3	.....	.....	.....	.....	.....	.....	.....
Company A.....	do.....	3	.....	3	63	11	64	.....	.....	.....	.....	.....	46	10
Company B.....	do.....	3	.....	3	72	6	77	.....	.....	.....	.....	.....	52	19
Company C.....	do.....	3	.....	3	58	7	65	.....	.....	.....	.....	.....	50	3
Company D.....	do.....	3	.....	3	65	.....	65	.....	.....	.....	.....	.....	53	17
Total.....	.....	15	1	16	251	23	274	.....	.....	.....	.....	.....	201	56
Aggregate inspected.....	.....	185	27	212	2,271	841	3,112	403	.....	.....	1,675	.....	1,760	1,161
Aggregate recognized.....	.....	171	26	197	2,099	709	2,808	.....	.....	.....	.....	.....	.....	.....

TABLE 9.—Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.

WASHINGTON.

Table of organization.

With Companies, inclusive.
A.

Organization.	Station.	Strength at inspection.			Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).						Action taken by Division of Militia Affairs as result of inspection.		
		Officers.		Enlisted men.	Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.			Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).	
		Present.	Absent.		Total.	Present.	Absent.	Total.	Number.	Average actual attendance.			Number.	Average actual attendance.
	Seattle.....	10	1	11	1	1	2	1	1	1	1	1	
	do.....	10	1	11	1	1	2	1	1	1	1	1	
	do.....	10	1	11	1	1	2	1	1	1	1	1	
	do.....	10	1	11	1	1	2	1	1	1	1	1	
	do.....	10	1	11	1	1	2	1	1	1	1	1	
	Seattle.....	1	1	2	5	1	5	2	19	14	21	46	
	do.....	2	1	3	15	1	16	1	21	17	17	17	
	do.....	2	1	3	15	1	16	1	21	17	17	17	
	do.....	2	1	3	15	1	16	1	21	17	17	17	
	do.....	2	1	3	15	1	16	1	21	17	17	17	
Medical Department: Detachments—													
Signal Corps.....	Seattle.....	1	1	2	5	1	5	2	19	14	21	46	
Coast Artillery Corps.....	do.....	2	1	3	15	1	16	1	21	17	17	17	
Second Infantry.....	do.....	2	1	3	15	1	16	1	21	17	17	17	
Medical Corps ¹	do.....	2	1	3	15	1	16	1	21	17	17	17	
Total.....		6	1	7	20	1	21	19	21	17	17	17	5

Company A.....	do.....	3	1	3	51	16	67	.....	.....	8	25	24	36	36	17
Company B.....	do.....	2	.....	3	41	18	59	.....	.....	15	30	36	24	24	39
Company C.....	Newport News.....	3	.....	3	51	12	63	.....	.....	8	46	52	38	9	.....
Company D.....	Norfolk.....	1	2	3	45	12	57	28	.....	8	26	24	36	21	.....
Company E.....	do.....	3	.....	3	39	26	65	.....	.....	8	42	55	35	17	.....
Company F.....	Suffolk.....	2	1	3	41	11	52	.....	.....	8	32	51	40	3	.....
Company G.....	Norfolk.....	3	.....	3	41	15	56	28	.....	8	24	26	38	33	.....
Company H.....	H i g h l a n d Springs.....	1	3	3	26	31	57	32	.....	8	36	47	29	29	.....
Company I.....	Franklin.....	3	.....	3	25	34	59	.....	.....	8	37	46	33	26	.....
Company K.....	Portsmouth.....	2	1	3	24	10	34	.....	.....	8	24	40	12	26	.....
Company L.....	do.....	2	.....	2	30	13	43	.....	.....	8	35	50	21	3	.....
Company M.....	Emporia.....	.....	1	1	22	33	55	.....	.....	8	29	35	26	27	.....
Total.....	.....	40	8	48	455	243	698	98	.....	.....	421	.....	386	.....	290
Richmond Light Infantry, Blues Battalion:	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Headquarters.....	Richmond.....	3	1	4	3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....
Company A.....	do.....	3	.....	3	53	11	64	.....	.....	.....	.....	52	46	10	.....
Company B.....	do.....	3	.....	3	72	5	77	.....	.....	.....	.....	51	52	19	.....
Company C.....	do.....	3	.....	3	58	7	65	.....	.....	.....	.....	63	50	3	.....
Company D.....	do.....	3	.....	3	65	.....	65	.....	.....	.....	.....	41	53	17	.....
Total.....	.....	15	1	16	251	23	274	.....	.....	.....	.....	.....	201	.....	56
Aggregate inspected.....	.....	185	27	212	2,271	841	3,112	.....	.....	.....	1,675	.....	1,760	.....	1,161
Aggregate recognized.....	.....	171	26	197	2,090	700	2,808	403	.....	.....	.....	.....	.....	.....	.....

REPORT OF THE CHIEF OF THE MILITIA BUREAU.

1125

[illegible]

1 Not serving with troops.

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TABLE 9.—Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.

WISCONSIN.

Table of organization.

Second, and Third Infantry; First Separate Company.

A.
Battery A.

Field Hospital No. 1; 3 detachments.

Organization.	Station.	Strength at inspection.			Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).						Action taken by Division of Militia Affairs as result of inspection.		
		Officers.		Enlisted men.		Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.		Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).	
		Present.	Absent.	Total.	Present.	Absent.	Total.	Number.	Average actual attendance.	Number.			Average actual attendance.
Adjutant General's Department.	Madison.....	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Inspector General's Department.	do.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
	do.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
	do.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
	do.....	2	1	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
	do.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Medical Department:	Milwaukee.....	5	.....	5	30	4	43	.....	9	45	43	26	27
Field Hospital No. 1.....	do.....	4	.....	4	20	2	22	.....	7	28	45	17	10
Detachments—	do.....	4	.....	4	24	.....	24	.....	7	26	41	17	5
First Infantry.....	Appleton.....	3	.....	3	24	1	25	.....	7	25	30	15	20
Second Infantry.....	La Crosse.....	2	1	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Third Infantry.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Medical Corps.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	.....	18	1	19	107	7	114	22	.....	127	.....	75	92

TABLE 9.—Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.

WISCONSIN—Continued.

Organisation.	Station.	Strength at inspection.			Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).						Action taken by Division of Militia Affairs as result of inspection.		
		Officers.		Enlisted men.		Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assembles for drill and instruction.			
		Present.	Absent.	Total.	Present.	Absent.	Total.	Number.	Average actual attendance.	Number.		Average actual attendance.	
													Number.	Average actual attendance.
Third Infantry:													
Field officers, etc.	Sparta.....	7		7	26		26						18
Headquarters company.	Eau Claire.....	4		4	23	9	32	7		109	26		52
Band section.	do.....				50		50						31
Machine-gun company.	Rice Lake.....	2		2	36		36	17	55	31	25		18
Supply company.	Superior.....	3		3	65	2	67	9	30	28	25		30
Company A.	Neillsville.....	3		3	72		72	7	58	58	40		24
Company B.	La Crosse.....	2		2	62		62	7	59	56	33		39
Company C.	Hudson.....	3		3	56		56	7	61	42	38		29
Company D.	Mauston.....	2	1	3	63	7	70	7	63	45	32		49
Company E.	Eau Claire.....	3		3	54	15	69	7	62	65	33		33
Company F.	Portage.....	3		3	65		65	7	69	46	41		24
Company G.	Wausau.....	3		3	59	12	71	7	66	52	44		68
Company H.	Menomonie.....	3		3	68	1	69	7	60	50	39		32
Company I.	Superior.....	3		3	65		65	7	77	38	24		21
Company K.	Tonah.....	3		3	71	1	72	7	67	56	38		14
Company L.	Sparta.....	3		3	65	1	66	7	66	54	33		
Company M.	La Crosse.....	3		3	64	1	65	7	68	31	35		
Total.....		50	1	51	901	49	950		217		516		482
First Separate Company, Infantry.	Chippewa Falls..	3		3	53	6	59	7	67	48	25		65
Aggregate inspected and recognized.....		180	3	192	3,068	179	3,247		722		1,312		1,528

Placed on probation.

WYOMING.

State designation. Gov. John B. Kendrick. Adjutant General's Department. State headquarters. Judge Advocate General's Department. Capt. Luther R. Infantry: First and Second Separate Battalions. Sanitary troops: 1 detachment.

Table of organization.

Organization.	Station.	Strength at inspection.				Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).								Action taken by Division of Militia Affairs as result of inspection.
		Officers.		Enlisted men.		Consecutive days on practice march.		Consecutive days in camp for instruction.		Assemblies for drill and instruction.		Number not actually present at times for drill and instruction (exclusive of field or camp service for instruction).		
		Present.	Absent.	Total.	Present.	Absent.	Total.	Number.	Average actual attendance.	Number.	Average actual attendance.			
Adjutant General's Department.	Cheyenne.	1		1										
Judge Advocate General's Department.	do.		1	1										
Quartermaster Corps.	do.	1		1										
Ordnance Department.	do.	1		1										
Medical Department.														
Detachment Hospital Corps.	Laramie.	1		1	14	2	16					48	18	17
Medical Corps.		1	1	2										
Total.		2	1	3	14	2	16						18	17
Infantry:														
First Separate Battalion—														
Headquarters.	Cody.	5		5	1		1							5
Company B.	Lander.	2	1	3	36	33	68					46	23	26
Company C.	Powell.	3		3	42	24	66					33	26	64
Company E.	Cody.	1		1	19	50	60					42	13	53
Company F.	Douglas.	2		2	40	31	71					40	33	18
Total.		13	1	14	137	138	275						93	176

* Not serving with troops.

* Includes 1 Lieutenant colonel, unassigned.

TABLE 9.—Designations and stations of the Organized Militia, number present at and absent from the inspections held in accordance with section 14 of the militia law, the instruction had during the year ended Dec. 31, 1915, under section 18 of the militia law, and the action taken by the Division of Militia Affairs as result of inspection—Continued.

WYOMING—Continued.

Organization.	Station.	Strength at inspection.			Instruction during year ended Dec. 31, 1915 (sec. 18, militia law).								Action taken by Division of Militia Affairs as result of inspection.
		Officers.		Enlisted men.			Consecutive days on practice march.		Consecutive days in camp service for instruction.		Assemblies for drill and instruction.		Number not actually present 24 times for drill and instruction (exclusive of field or camp service for instruction).
		Present.	Absent.	Total.	Present.	Absent.	Total.	Number.	Average actual attendance.	Number.	Average actual attendance.	Number.	
Infantry—Continued.													
Second Separate Battalion—													
Headquarters.....	Cheyenne.....	2	.....	12	1	.....	1	.....	.....	.....	.....	.....	.....
Company A.....	Newcastle.....	3	.....	3	55	14	69	.....	.....	49	26	26	26
Company D.....	Sheridan.....	2	1	3	26	39	65	.....	.....	50	14	55	55
Company G.....	Cheyenne.....	3	.....	3	50	33	83	.....	.....	58	28	50	50
Company I.....	Wheatland.....	2	1	3	36	34	70	.....	.....	43	23	.....	.....
Total.....	.....	12	2	14	168	120	288	.....	.....	.....	91	175	.....
Aggregate inspected and recognized.	.....	30	5	35	319	260	579	.....	.....	.....	202	368	.....

¹ The major commanding this battalion is also the adjutant general and is accounted for under the adjutant general's department.

TABLE 10.—*Number of sergeants of different arms of the Regular Army on duty with the several States, the Territory of Hawaii, and the District of Columbia.*

State, Territory, or District.	Infantry.	Cavalry.	Field Artillery.	Coast Artillery.	Engineers.	Signal Corps.	Sanitary troops.	Total.
Alabama.....	3	.....	1	.....	.....	.....	1	5
Arizona.....	1	.....	.....	.....	.....	.....	.....	1
Arkansas.....	1	.....	.....	.....	.....	.....	.....	1
California.....	.....	1	3	2	.....	.....	.....	6
Colorado.....	.....	.....	1	.....	.....	.....	.....	1
Connecticut.....	2	2	2	3	.....	1	.....	10
Delaware.....	1	.....	.....	.....	.....	.....	.....	1
District of Columbia.....	2	.....	1	.....	.....	.....	.....	3
Florida.....	1	.....	.....	.....	.....	.....	.....	1
Georgia.....	1	.....	1	1	.....	.....	1	4
Hawaii.....	1	.....	.....	.....	.....	.....	.....	1
Idaho.....	1	.....	.....	.....	.....	.....	.....	1
Illinois.....	4	2	.....	.....	1	.....	1	8
Indiana.....	2	.....	1	.....	.....	.....	.....	3
Iowa.....	2	1	3	.....	.....	.....	.....	6
Kansas.....	2	.....	1	.....	.....	1	.....	4
Kentucky.....	2	.....	.....	.....	.....	.....	.....	2
Louisiana.....	1	1	1	.....	.....	.....	.....	3
Maine.....	.....	.....	.....	3	.....	.....	.....	3
Maryland.....	3	.....	.....	.....	.....	.....	1	4
Massachusetts.....	6	1	4	4	.....	1	1	17
Michigan.....	4	.....	1	.....	.....	.....	.....	5
Minnesota.....	2	.....	2	.....	.....	.....	1	5
Missouri.....	.....	1	3	.....	.....	.....	.....	4
New Hampshire.....	1	.....	.....	.....	.....	.....	.....	1
New Jersey.....	4	1	1	.....	.....	.....	.....	6
New Mexico.....	1	.....	1	.....	.....	.....	.....	2
New York.....	13	2	2	9	1	1	2	30
North Carolina.....	1	1	.....	1	.....	.....	1	4
North Dakota.....	1	.....	.....	.....	.....	.....	.....	1
Ohio.....	9	1	2	.....	1	.....	1	14
Oklahoma.....	1	1	.....	.....	.....	.....	.....	2
Oregon.....	1	.....	1	1	.....	.....	.....	3
Pennsylvania.....	7	1	4	.....	1	.....	1	14
Rhode Island.....	.....	1	1	2	.....	.....	1	5
South Carolina.....	1	.....	.....	.....	.....	.....	.....	1
Tennessee.....	1	1	.....	.....	.....	.....	1	3
Texas.....	2	.....	1	.....	.....	.....	.....	3
Utah.....	.....	1	.....	.....	.....	.....	.....	1
Vermont.....	1	1	.....	.....	.....	.....	.....	2
Virginia.....	3	.....	.....	.....	.....	.....	1	4
Washington.....	1	.....	.....	1	.....	.....	.....	2
West Virginia.....	1	.....	.....	.....	.....	.....	.....	1
Wisconsin.....	3	.....	.....	.....	.....	.....	1	4
Wyoming.....	1	.....	.....	.....	.....	.....	.....	1
Total.....	95	20	38	27	4	4	15	203

TABLE 11.—National Guard organizations called into service of the United States, and status of transportation (escort wagons and ambulances) in hands of the National Guard of Arizona, New Mexico, and Texas, on May 9, 1916, and of the remaining States and the District of Columbia on June 18, 1916.

State or District.	Infantry.			Cavalry.			Field Artillery.			Engineers.		Signal.		Sanitary.		Strength.	
	Regiments.	Separate bat- talions.	Separate com- panies.	Regiments.	Separate squadrons.	Separate troops.	Regiments.	Separate bat- talions.	Separate bat- teries.	Battalions.	Separate com- panies.	Battalions.	Separate com- panies.	A m b u lances companies.	Field hospit- als.	Peace.	War.
FIRST CALL.																	
Arizona.....	1															990	1,915
New Mexico.....	1								1						1	1,166	2,164
Texas.....	3				1				1						1	3,461	6,414
Total.....	5				1				2						2	5,617	10,493
SECOND CALL.																	
Alabama.....	3								2				1			3,333	6,183
Arkansas.....	2															1,980	3,830
California.....	3				1			1					1	1	1	3,885	6,954
Colorado.....		2			1				2				1			1,396	2,413
Connecticut.....	2					2		1	3				1			3,130	5,529
Delaware.....		2														554	1,168
District of Columbia.....	1	1				1			2				1			1,731	3,104
Florida.....	1															990	1,915
Georgia.....	3				1	1										3,823	6,891
Idaho.....	1							1								990	1,915
Illinois.....	6			1				2					1			8,031	14,298
Indiana.....	2	2	3					1					1			3,338	6,209
Iowa.....	3				1			1						1		3,871	7,038
Kansas.....	2								1				1			2,200	4,068
Kentucky.....	3					1										3,143	5,988
Louisiana.....	1							1								1,490	2,568
Maine.....	1															990	1,915
Maryland.....	3					1			1							3,267	6,186
Massachusetts.....	4				1											5,475	9,606
Michigan.....	3					2			2				1	2		3,671	6,796
Minnesota.....	3															3,966	7,055
Mississippi.....		3														831	1,737
Missouri.....	3	2	1					1								4,265	7,943
Montana.....	1												1			990	1,915

[illegible]

TABLE 11.—National Guard organizations called into service of the United States, and status of transportation (escort wagons and ambulances) in hands of the National Guard of Arizona, New Mexico, and Texas, on May 9, 1916, and of the remaining States and the District of Columbia on June 18, 1916—Continued.

State or District.	Escort wagons.						Ambulances.			Harness.					
	Escort wagons.						Ambulances.			Harness.					
	Required.	On hand, United States property.	On hand, State property.	Total on hand.	Shortage.	Excess.	Required.	On hand.	Shortage.	Required.	On hand, United States property.	On hand, State property.	On hand, State property.	Total on hand.	Shortage.
FIRST CALL.	22	22	.....	22	.....	.....	.....	.....	.....	44	44	.....	.....	44	.....
	33	20	.....	20	13	.....	.....	1	.....	66	40	.....	.....	40	26
	87	6	.....	6	81	.....	.....	10	.....	174	32	.....	.....	38	136
	142	48	.....	48	94	.....	.....	11	.....	284	116	.....	.....	122	162
SECOND CALL.	77	30	.....	30	47	.....	.....	.....	.....	154	60	.....	.....	60	94
	44	44	.....	44	.....	.....	.....	.....	.....	88	88	.....	.....	88	.....
	100	101	.....	101	.....	1	12	12	.....	324	220	.....	.....	220	4
	43	2	.....	2	41	.....	.....	1	.....	86	4	.....	.....	4	82
	81	81	9	90	.....	9	12	18	.....	186	216	.....	.....	216	.....
	14	14	.....	14	.....	.....	.....	1	.....	28	30	.....	.....	30	.....
	49	47	.....	47	3	.....	.....	2	.....	98	106	.....	.....	106	.....
	22	44	.....	44	.....	22	.....	2	.....	44	92	.....	.....	92	.....
	95	91	.....	91	4	.....	.....	.....	.....	190	194	.....	.....	194	.....
	23	22	.....	22	.....	.....	.....	.....	.....	44	50	.....	.....	50	.....
	199	242	.....	242	.....	43	.....	2	.....	398	484	.....	.....	484	.....
	85	47	.....	47	38	.....	12	12	.....	194	130	.....	.....	130	64
	97	100	2	102	.....	5	12	16	.....	218	236	.....	.....	236	.....
	51	49	.....	49	2	.....	.....	2	.....	102	98	.....	.....	98	4
	82	78	.....	78	4	.....	12	6	.....	188	168	.....	.....	168	20
	33	33	.....	33	.....	.....	.....	1	.....	66	66	.....	.....	66	.....
	22	22	.....	22	.....	.....	.....	1	.....	44	44	.....	.....	44	.....
	83	81	.....	81	2	.....	12	14	.....	190	186	.....	.....	186	4
	123	110	41	157	.....	24	12	13	.....	290	314	.....	.....	314	.....

REPORT OF THE CHIEF OF THE MILITIA BUREAU. 1135

Michigan	96	97	1	96	90	24	25	240	194	194	46	240	213	215	22
Minnesota	84	90		90	35	6	6	168	188	188		168	188	188	
Mississippi	21	35		35	1	14	1	42	70	70		42	80	80	
Missouri	108	107		107	5		15	240	210	210	30	240	210	210	30
Montana	23	17		17	8		3	44	34	34	10	44	34	34	10
Nebraska	56	56		56			4	112	112	112		112	112	112	
New Hampshire	31	36		36		5	4	62	72	72		62	72	72	
New Jersey	97	144		144		47	4	218	288	288		218	288	288	
New York	640	685	37	722		82	62	1,376	1,438	1,438		1,376	1,447	1,447	
North Carolina	82	82		82			14	188	170	170	18	188	170	170	18
North Dakota	22	23		23		1	1	44	46	46		44	46	46	
Ohio	193	204		204		11	29	434	432	432	2	434	393	393	41
Oklahoma	35	38		38		3	1	70	78	78		70	76	76	
Oregon	27	27		27			2	64	66	66		64	68	68	
Pennsylvania	590	598	33	541		49	9	1,228	1,064	1,064	104	1,228	1,072	1,082	146
Rhode Island	12	17		17		6	12	48	30	30	18	48	30	30	18
South Carolina	46														4
South Dakota	22														
Tennessee	62														
Texas	16														
Vermont	31														
Virginia	64														
Washington	28														
West Virginia	22														
Wisconsin	90														
Wyoming	14														
Total	3,827													561	
Grand total	3,969													723	

TABLE 12.—Showing results of correspondence course for medical officers of the National Guard, session ended June 30, 1916.

State, Territory, or District.	Total number of medical officers.	Completed course.		Taking examination.		Receiving 75 per cent or over.		Failed to compete.	Declined course.	Failed.	Withdrawn.	Excused.	Resigned.	Retired.
		Basic.	Year A.	Basic.	Year A.	Basic.	Year A.							
Alabama.....	22	17	19	17	19	17	18	1	4	1			6	
Arizona ¹														
Arkansas.....	11	1		(3)		(3)		6	4					
California ²														
Colorado ³														
Connecticut.....	20	4	10	4	10	2	10		5	2		1		
Delaware.....	4								1			2	1	
District of Columbia.....	13		11		11		11	1				1		
Florida.....	9	2	5	2	5	2	5						2	
Georgia.....	28	9	12	9	12	9	12	1	10				3	2
Hawaii ⁴														
Idaho.....	11		3		3		3	5	2			1		
Illinois.....	45	4	28	4	28	4	28	5	3			2	2	1
Indiana.....	19	15	1	15	1	15	1	1		1			1	
Iowa.....	27	5	6	5	6	5	6	10	1			3	2	
Kansas.....	19		6		5		5	3	1				1	
Kentucky.....	15	13		13		13			2					
Louisiana.....	6	1	2		1		1		3					
Maine.....	10	4	3	4	3	4	3	2				1		
Maryland.....	19	6	10	6	10	5	10		1	1		2		
Massachusetts.....	39	6	26	6	26	6	26	1	3			2	2	
Michigan.....	29	19	2	18	2	18	2	3	3			1	1	
Minnesota.....	15	3	4	5	5	3	3	4	3	4	1		2	
Mississippi.....	7	1	5										2	
Missouri.....	37	3	13	7	13	3	13	4	10				7	
Montana.....	4		4		4		4							
Nebraska.....	13		7		6		6	3	3					
Nevada ¹⁰														
New Hampshire.....	7	3		3		3		1	2				1	
New Jersey.....	31	5	15	5	15	5	15	3	5			3		
New Mexico ²														
New York.....	137	26	70	26	70	26	70	2	7			24	7	4
North Carolina.....	32	11 9	11 13	11 9	11 13	11 9	11 13	2	7				6	
North Dakota.....	4	2	2	2	2	2	2							
Ohio.....	60	32	10	12 11	29	12 11	30	2	9	1		8		
Oklahoma.....	9	5		5		5		4						
Oregon.....	13		2		2		2	2	8				1	
Pennsylvania.....	69	10	29	9	21	0	21	20	10				8	1
Rhode Island.....	9	3	4	3	4	3	3	1		1			1	
South Carolina.....	27	7	5	7	5	7	5	5	9				2	
South Dakota.....	4		2		2		2	2						
Tennessee.....	23	12 10	12 11	12 10	12 11	12 10	12 11	2	3			2	5	
Texas.....	18	8		(6)		(6)		3	7					
Utah ¹														
Vermont.....	5	1	3	1	3	1	3		1					
Virginia.....	15	2	6	2	6	2	6	3	2			1	1	
Washington.....	12	1	5	1	5	1	5		6					
West Virginia.....	10	1	6		3		3	4	2				1	
Wisconsin.....	19	3	14	4	14	3	14			1		1		
Wyoming.....	3	1	1	1	1	1	1					1		
Total.....	919	232	365	204	366	194	363	106	137	11	2	57	65	8

¹ Six took basic and year A.² No report.³ Did not take final.⁴ Maj. Carl Phillips, Kansas, was awarded a certificate of proficiency under the provisions of General Orders, No. 43, War Department, 1914.⁵ One failed to take final examination.⁶ Called into Federal service.⁷ One died; 1 commissioned too late.⁸ One took basic and year A.⁹ One failed to take final examination.¹⁰ No organized militia.¹¹ Five took basic and year A in 1916.¹² Took basic and year A.¹³ Eight took basic and year A.

TABLE 13.—Strength of sanitary troops, gain or loss during the fiscal year 1916, and number of sanitary organizations in the National Guard on June 30, 1916.

State, Territory, or District.	Commissioned officers as reported by adjutants general, Dec. 31, 1915.			Enlisted men.			Aggregate.		Gain or loss.		Units.		
	Inspected.	Not in-spected.	Total, 1916.	Inspected.	Not in-spected.	Total, 1916.	1916.	1915.	Gain.	Loss.	Ambulance companies.	Field hospitals.	Detachments.
Alabama.....	10	4	14	47	12	59	73	65	8	.....	.....	.....	3
Arizona.....	4	.....	4	16	.....	16	20	21	.....	1	.....	.....	1
Arkansas.....	9	2	11	18	6	24	35	37	.....	2	.....	.....	2
California.....	21	4	25	128	23	151	176	150	26	.....	1	1	7
Colorado.....	6	2	8	46	20	66	74	34	40	.....	.....	1	.....
Connecticut.....	18	3	21	125	11	136	157	139	18	.....	1	1	5
Delaware.....	2	1	3	3	1	4	7	8	.....	1	.....	.....	1
District of Columbia.	12	.....	12	46	19	65	77	88	.....	11	.....	1	2
Florida.....	6	2	8	21	1	22	30	42	.....	12	.....	.....	2
Georgia.....	14	9	23	55	21	76	99	121	.....	22	.....	1	5
Hawaii.....	3	11	14	18	3	21	35	21	14	.....	.....	.....	1
Idaho.....	5	1	6	16	1	17	23	21	2	.....	.....	.....	1
Illinois.....	42	6	48	227	25	252	300	232	68	.....	.....	2	10
Indiana.....	17	1	18	86	33	119	137	123	14	.....	1	1	2
Iowa.....	23	3	26	131	7	138	164	110	54	.....	1	1	4
Kansas.....	5	4	9	40	1	41	50	42	8	.....	.....	.....	1
Kentucky.....	14	1	15	69	21	90	105	101	4	.....	1	1	3
Louisiana.....	5	3	8	30	5	35	43	47	.....	4	.....	.....	1
Maine.....	10	.....	10	20	16	36	46	45	1	.....	.....	.....	2
Maryland.....	19	.....	19	88	4	92	111	89	22	.....	1	1	3
Massachusetts.....	38	2	40	225	16	241	281	204	77	.....	1	2	9
Michigan.....	26	3	29	128	57	185	214	124	90	.....	2	1	3
Minnesota.....	14	3	17	65	3	68	85	60	25	.....	.....	.....	4
Mississippi.....	5	1	6	21	.....	21	27	45	.....	18	.....	.....	1
Missouri.....	20	9	29	106	25	131	160	154	6	.....	1	1	3
Montana.....	3	1	4	13	2	15	19	16	3	.....	.....	.....	1
Nebraska.....	10	.....	10	69	13	82	92	90	2	.....	.....	1	2
Nevada ¹.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
New Hampshire.....	6	1	7	21	5	26	33	33	.....	.....	.....	.....	1
New Jersey.....	28	2	30	128	14	142	172	196	.....	24	1	1	8
New Mexico.....	6	.....	6	4	5	9	15	20	.....	5	.....	.....	.....
New York.....	109	2	111	653	40	693	804	800	4	.....	4	3	30
North Carolina.....	24	4	28	106	23	129	157	162	.....	5	1	1	4
North Dakota.....	4	.....	4	23	1	24	28	22	6	.....	.....	.....	1
Ohio.....	57	.....	57	335	10	345	402	368	34	.....	2	3	13
Oklahoma.....	9	1	10	49	5	54	64	68	.....	4	.....	1	1
Oregon.....	5	2	7	33	.....	33	40	54	.....	14	.....	.....	2
Pennsylvania.....	54	14	68	188	28	216	284	288	.....	4	2	2	13
Rhode Island.....	8	1	9	65	3	68	77	42	35	.....	1	.....	1
South Carolina.....	7	2	9	37	4	41	50	24	26	.....	.....	.....	1
South Dakota.....	5	.....	5	18	.....	18	23	25	.....	2	.....	.....	1
Tennessee.....	12	5	17	92	13	105	122	138	.....	16	1	1	2
Texas.....	12	6	18	26	11	37	55	41	14	.....	.....	1	3
Utah.....	2	1	3	20	.....	20	23	22	1	.....	.....	.....	1
Vermont.....	4	.....	4	17	.....	17	21	20	1	.....	.....	.....	1
Virginia.....	13	2	15	53	10	63	78	67	11	.....	.....	1	2
Washington.....	6	2	8	20	1	21	29	38	.....	9	.....	.....	4
West Virginia.....	7	2	9	31	11	42	51	46	5	.....	.....	.....	2
Wisconsin.....	18	1	19	107	7	114	133	120	13	.....	.....	1	3
Wyoming.....	2	1	3	14	2	16	19	26	.....	7	.....	.....	1
Total.....	759	125	884	3,897	539	4,436	5,320	4,849	632	161	22	31	174

¹ No organized militia (mustered out May 20, 1906).

TABLE 14.—Results of small-arms practice, organized militia, season 1915.

State, Territory, or District.	Rifle firing. Organized Militia course.											
	Classification.											
	Expert riflemen.	Expert riflemen, hold-overs.	Sharpshooters.	Marksmen.	First-class men.	Second-class men.	Unqualified who fired and completed instruction course.	Unqualified who fired but failed to complete instruction course.	Total firing range practice.	Unqualified who failed to fire.	Unclassified.	Total borne on rolls during target year.
Alabama.....	70	16	70	153	95	85	94	1,080	1,672	709	176	2,557
Arizona.....	57	12	28	49	45	29	33	57	308	404	648	970
Arkansas.....	27	3	66	106	101	101	745	26	1,174	356	25	1,555
California.....	360	2	238	362	91	78	264	257	1,650	1,978	172	3,800
Colorado ¹												
Connecticut.....	112	65	198	555	445	70	10	971	2,426	329	92	2,847
Delaware.....	12	15		6	4	3	3	33	61	327	214	617
District of Columbia.....	92	14	97	169	253	34	14	119	792	826	38	1,656
Florida.....	101	10	111	164	147	48	4	149	728	502	646	1,250
Georgia.....	353	129	260	537	204	145	72	96	1,796	1,112	1,116	4,024
Hawaii.....	14	21	13	51	29	36	81	24	269	698	33	1,000
Idaho.....	82	6	141	280	58	44	104	9	724	127	176	1,027
Illinois.....	587	240	527	721	1,484	181	82	885	4,707	2,282	472	7,461
Indiana.....	120	12	124	216	169	161	173	224	1,199	1,247	84	2,530
Iowa.....	342		320	653	227	59	15	38	1,654	175	509	2,600
Kansas.....	160	31	119	243	55	38	43	101	769	1,110	40	1,940
Kentucky.....	99	17	72	152	52	53	61	64	570	710	41	1,321
Louisiana.....	4	3	7	25	50	12	22	56	179	761	25	965
Maine ¹												
Maryland.....	88	21	203	452	542	68		382	1,756	301	31	2,088
Massachusetts.....	979	537	1,084	1,634	356	238	55	194	5,077	676	837	6,500
Michigan.....	292	59	238	408	490	188	147	298	2,061	755	187	2,895
Minnesota.....	271	47	218	505	111	171	626	118	2,067	911	68	3,046
Mississippi.....	25	10	46	72	44	87	283	10	575	716	40	1,333
Missouri.....	45	28	50	129	135	144	221	795	1,537	1,521	454	3,512
Montana.....	54	8	89	97	68	34	9	33	392	276	10	678
Nebraska ¹												
Nevada ²												
New Hampshire.....	58	13	40	118	95	76	123	316	839	345	8	1,192
New Jersey.....	206	7	330	643	572	137	19	750	2,657	930		3,587
New Mexico.....	39		35	38	6	26	17	55	216	516		732
New York.....	735	176	852	1,432	1,190	937	4,747	593	10,635	2,987	313	13,950
North Carolina.....	81	5	103	287	107	58	1,383	90	2,114	168		2,282
North Dakota.....	62		72	109	44	24	85	70	466	162	2	630
Ohio.....	149		106	198	81	77	137	170	918	565	3	1,486
Oklahoma.....	52	1	72	136	50	42	110	18	481	173	110	563
Oregon.....	236	63	141	195	129	79	91	160	1,094	572	98	1,764
Pennsylvania ¹												
Rhode Island.....	128		204	287	181	14	1	69	884	665	181	1,730
South Carolina.....	29	3	42	41	12	20	37	543	724	716	582	1,443
South Dakota.....	19	4	44	94	49	88	158	33	489	265	302	1,051
Tennessee.....	44	3	53	85	96	20		733	1,034	481		1,515
Texas.....	26	13	37	67	45	20	44	44	283	330		613
Utah.....	47	9	28	48	32	26	50	9	249	78	15	342
Vermont.....	33	7	27	73	15	8	26		189	16		119
Virginia.....	32	3	72	180	109	75	267	779	1,517	494	641	2,652
Washington.....	166	50	169	219	193	38	43	133	961	482	179	1,672
West Virginia.....	68	21	77	84	79	17	17	764	1,127	460	132	1,719
Wisconsin.....	423		385	539	426	246	172	200	2,391	716		3,107
Wyoming.....	40	11	33	83	78	72	60	55	432	217		649
Total.....	7,019	1,695	7,241	12,695	8,844	4,207	10,748	11,612	63,841	30,147	8,760	101,128

¹ No report received. ² No Organized Militia (mustered out May 20, 1906).

TABLE 14.—Results of small-arms practice organized militia, season 1915—Continued.

State, Territory, or District.	Total qualifying in long-range practice.	Total qualifying in gallery practice test.	Total firing prescribed gallery course.	Armed with 1 returns of	Percentage of strength firing rifle to total strength armed with rifle.	Pistol firing.			
						Classification.			
						Expert pistol shots.	First-class men.	Second-class men.	Unqualified.
Alabama.....	14	1,794	1,823	2,002	64.25				
Arizona.....	45	121	144	900	34.00				
Arkansas.....		305	1,063	1,394	64.79				
California.....		1,191	1,241	3,070	53.75	67	65	94	711
Colorado ¹									
Connecticut.....		2,647	2,647	2,664	84.35	2	11	38	644
Delaware.....		176	176	412	14.81				
District of Columbia.....		14	249	1,455	54.43		1		220
Florida.....		834	908	1,467	49.76				
Georgia.....	86	386	479	2,574	69.77	30	35	207	730
Hawaii.....	17	27	46	3,008	8.94				
Idaho.....		101	103	902	80.27	3			
Illinois.....		3,500	3,503	5,791	81.28	15	21	36	44
Indiana.....	29	915	915	2,260	52.91	4	1		809
Iowa.....		1,451	1,446	2,902	79.16				
Kansas.....	27	625	535	1,794	42.87				
Kentucky.....	23	325	441	2,468	23.10				
Louisiana.....		430	511	972	18.42				
Maine ¹									
Maryland.....		1,262	1,358	2,150	81.67	1	13	12	41
Massachusetts.....	485	3,307	3,764	5,545	91.56	167	160	217	1,180
Michigan.....	27	1,903	2,257	3,055	67.46	9	4	10	
Minnesota.....				2,445	84.55		8	46	176
Mississippi.....	8	830	995	1,430	40.21	12	113	125	
Missouri.....	8	1,490	1,707	3,612	42.55	2	2	8	
Montana.....	21	199	218	881	44.49	5	3		34
Nebraska ¹									
Nevada ¹									
New Hampshire.....	15	704	831	1,165	72.02	18	16	29	265
New Jersey.....	115	2,474	2,731	3,912	67.85		8	30	236
New Mexico.....		146	163	779	27.72		1	2	4
New York.....				14,508	73.30	16	19	75	1,324
North Carolina.....		1,580	1,694	3,037	69.61				
North Dakota.....	15	248	271	688	67.73	11	2	6	63
Ohio.....				6,639	13.83		1	19	
Oklahoma.....	2	349	360	1,179	40.71				
Oregon.....	72	633	654	1,425	76.77	5	10	15	283
Pennsylvania ¹									
Rhode Island.....		570	624	1,297	69.16	3	36	105	475
South Carolina.....	1	905	1,422	1,734	41.75				
South Dakota.....		606	628	896	54.58				
Tennessee.....	16	614	966	1,799	57.48				
Texas.....		262	299	2,671	10.60	6			
Utah.....		217	228	397	62.72				
Vermont.....		54	54	826	22.89				
Virginia.....	10	1,616	1,599	2,680	57.03	1	10	3	92
Washington.....	39	703	658	1,195	80.42	27	21	23	320
West Virginia.....			1,062	1,695	66.49				
Wisconsin.....	61	1,971	2,147	3,035	78.78		14	43	152
Wyoming.....	52	167	246	647	66.77	2	2	6	23
Total.....	1,591	38,400	43,457	108,561	58.81	406	571	1,165	7,826

¹ No report received.² No Organized Militia (mustered out May 20, 1906).

TABLE 15.—*National trophy award, 1916.*

(Circular No. 5, Division of Militia Affairs, 1914.)

State, Territory, or District.	Organization.	Station.	Figure of merit.
Alabama.....	Company D, Second Infantry.....	Montgomery.....	56.4
Arizona.....	None qualified.....	.....	.....
Arkansas.....	None reported qualified.....	.....	.....
California.....	Company D, Seventh Infantry.....	Pomona.....	68.0
Colorado.....	None qualified.....	.....	.....
Connecticut.....	Company F, Second Infantry.....	New Haven.....	65.6
Delaware.....	None qualified.....	.....	.....
District of Columbia....	Company K, Third Infantry.....	Washington, D. C.	64.4
Florida.....	Company E, First Infantry.....	Jacksonville.....	45.4
Georgia.....	Company E, Third Separate Battalion of Infantry.	Lindale.....	86.0
Hawaii.....	None reported qualified.....	.....	.....
Idaho.....	Company F, Second Infantry.....	Lewiston.....	69.0
Illinois.....	Troop C, First Cavalry.....	Chicago.....	60.8
Indiana.....	Company B, Third Infantry.....	Angola.....	54.8
Iowa.....	Company A, Engineers.....	Iowa City.....	77.8
Kansas.....	Company E, Second Infantry.....	Hutchinson.....	53.0
Kentucky.....	None qualified.....	.....	.....
Louisiana.....	.....do.....	.....	.....
Maine.....	Company F, Second Infantry.....	Dover.....	67.0
Maryland.....	Company F, First Infantry.....	Hyattsville.....	65.6
Massachusetts.....	Company K, Sixth Infantry.....	Lowell.....	73.4
Michigan.....	None reported qualified.....	.....	.....
Minnesota.....	Company G, First Infantry.....	St. Paul.....	83.6
Mississippi.....	None qualified.....	.....	.....
Missouri.....	.....do.....	.....	.....
Montana.....	Company F, Second Infantry.....	Kalispell.....	65.6
Nebraska.....	None qualified.....	.....	.....
Nevada ¹.....	.....	.....	.....
New Hampshire.....	Company E, First Infantry.....	Concord.....	47.2
New Jersey.....	Troop C, First Squadron Cavalry.....	Newark.....	62.8
New Mexico.....	Company B, First Infantry.....	Carlsbad.....	34.2
New York.....	Company H, Second Infantry.....	Amsterdam.....	88.0
North Carolina.....	Company K, First Infantry.....	Asheville.....	75.8
North Dakota.....	Company E, First Infantry.....	Williston.....	62.4
Ohio.....	Troop A, First Cavalry.....	Cleveland.....	57.0
Oklahoma.....	None reported qualified.....	.....	.....
Oregon.....	Company B, Third Infantry.....	Portland.....	88.2
Pennsylvania.....	State desires no award be made.....	.....	.....
Rhode Island.....	Fourth Company, Coast Artillery Corps.....	Providence.....	67.4
South Carolina.....	None fired course.....	.....	.....
South Dakota.....	Company F, Fourth Infantry.....	Mitchell.....	51.6
Tennessee.....	None qualified.....	.....	.....
Texas.....	.....do.....	.....	.....
Utah.....	Company G, First Infantry.....	Ephraim.....	48.4
Vermont.....	Troop D, First Cavalry.....	Northfield.....	25.6
Virginia.....	State desires no award be made.....	.....	.....
Washington.....	First Company, Coast Artillery Corps.....	Seattle.....	98.0
West Virginia.....	None qualified.....	.....	.....
Wisconsin.....	Company C, Second Infantry.....	Sheboygan.....	87.0
Wyoming.....	None qualified.....	.....	.....

¹ No Organized Militia (mustered out May 20, 1906).

TABLE 16.—*Extracts from inspections of Field Artillery*

State or District.	Armory.						What artillery target practice (not revolver) held during the calendar year 1915?	Care of Federal property.	
	Ownership.	Is it adequate for the instruction of the firing battery?	Is it provided with facilities for subcaliber practice?	Is it such as to encourage enlistments?	Does it contain facilities for mounted instruction?	What stable accommodations exist (figures represent number of horses)?		Is all property properly stored and cared for?	Is a competent caretaker provided?
Alabama:									
Battery A.....	Private.....	Yes.	No..	No..	No..	None.	Yes.	Yes.	Yes.
Battery C.....	do.....	Yes.	No..	No..	No..	None.	Yes.	Yes.	Yes.
California:									
Headquarters First Battalion.	do.....	Yes.	No..	Yes.	Yes.	None.	Yes.	Yes.	Yes.
Battery A.....	State.....	Yes.	No..	Yes.	Yes.	None.	Yes.	Yes.	Yes.
Battery B.....	Private.....	Yes.	No..	Yes.	Yes.	Good.	Yes.	Yes.	Yes.
Battery C.....	do.....	Yes.	No..	Yes.	No..	None.	Yes.	Yes.	Yes.
Colorado:									
Battery A.....	do.....	Yes.	No..	Yes.	No..	None.	None.	Yes.	Yes.
Battery B.....	do.....	Yes.	Yes.	Yes.	No..	32	None.	Yes.	Yes.
Connecticut:									
Headquarters First Battalion.								Yes.	No..
Battery A.....								Yes.	No..
Battery B.....								Yes.	No..
Battery C.....								Yes.	No..
Battery D.....								Yes.	No..
Battery E.....	State.....	Yes.	Yes.	Yes.	No..	12	Yes.	Yes.	Yes.
Battery F.....	do.....	Yes.	No..	Yes.	No..	22		Yes.	Yes.
District of Columbia:									
Battery A.....	Private.....	No..	No..	No..	No..	Rent.	Yes.	Yes.	Yes.
Battery B.....	do.....	No..	No..	No..	No..	Rent.	None.	Yes.	Yes.
Georgia:									
Headquarters First Battalion.	Private.....		No..	Yes.	No..	None.	Yes.	Yes.	No..
Battery A.....	do.....	No..	No..	Yes.	No..	None.	Yes.	Yes.	Yes.
Battery B.....	City.....	Yes.	No..	Yes.	No..	None.	Yes.	Yes.	Yes.
Battery C.....	Private.....	Yes.	No..	Yes.	No..	None.	Yes.	Yes.	Yes.
Illinois:									
Headquarters First Battalion.	do.....	No..	No..	Yes.	No..	Rent.	Yes.	Yes.	Yes.
Battery A.....	do.....	No..	No..	Yes.	No..	None.	Yes.	No..	Yes.
Battery B.....	do.....	No..	No..	Yes.	Yes.	15	Yes.	Yes.	Yes.
Battery C.....	Government.....	Yes.	No..	Yes.	Yes.	Good.	None.	Yes.	Yes.
Headquarters Second Battalion.	Private.....	Yes.	No..	Yes.	Yes.	50	None.	Yes.	Yes.
Battery D.....	do.....	Yes.	No..	No..	Yes.	50	None.	Yes.	Yes.
Battery E.....	do.....	Yes.	No..	Yes.	Yes.	50	None.	No..	Yes.
Battery F.....	State.....	Yes.	No..	Yes.	Yes.	12	None.	No..	Yes.

organizations under section 14, militia law.

Drill and instruction.					Horses.		
Average number attending drills.	How many men qualified during the calendar year as—		Degree of proficiency of special details in indoor drills.	Efficiency of organization in armory instruction.	Number continuously available for instruction.	How and to what extent are they provided for mounted instruction other than at annual encampments?	To what extent are mounted drills held?
	First-class gunners?	Second-class gunners?					
(1) 25	None..	None..	Poor..	Fair.....	None..	.....
	None..	None..	None..	do.....	None..	.....
5	None..	None..	Very good.	Very good.	5	Equitation drill in armory instruction under sergeant-instructor.	Quarterly.
49	None..	None..	Excellent.	do.....	10	Riding ring provided at armory; used on drill nights.	None.
37	None..	None..	do...	Good.....	5	Drill 1 night per week by sergeant-instructor.	Quarterly.
42	None..	None..	Very good.	Very good.	None..	None.....	None.
36	None..	None..	Good..	Good.....	None..	From 10 to 20 horses furnished by State for occasional mounted drill.	Once since Jan. 1, 1916.
25	None..	None..	do...	do.....	None..	About 10 to 15 horses, owned by State, brought to Denver occasionally for drill purposes.	6 during year.
128	.....	.....	.....	Good.....	5	Class in equitation daily, except Sunday.	None.
117	.....	.....	.....	do.....	5	do.....	Do.
127	.....	.....	.....	do.....	5	do.....	Do.
104	.....	.....	.....	do.....	5	do.....	Do.
62	1	1	Poor..	Fair.....	10	None.....	Do.
85	None..	None..	.....	Poor.....	10	do.....	Do.
54	2	3	Poor..	Fair.....	15	Mounted instruction held with animals from Fort Myer; also after a parade and a review.	Generally on Sunday.
29	None..	None..	do...	do.....	15	School of soldier mounted every Sunday.	Each Sunday.
4	None..	None..	Good..	Good.....	None..	.....
66	None..	None..	do...	do.....	None..	1 annually, owned by city.	1 annually.
46	None..	None..	Fair...	do.....	None..	.....
65	None..	None..	Good..	do.....	None..	.....
10	None..	None..	Fair...	Fair.....	3	Drilled once a week.....	None.
54	None..	None..	Poor..	.....	None..	None.....	Do.
51	None..	None..	Good..	Fair.....	10	Riding instruction drill nights; 10 horses available for limber drill Saturdays.	Limber drills on Saturdays, weather permitting.
68	None..	None..	Very good.	Very good.	6	United States Cavalry horses used every Monday night.	Riding instruction only.
None..	.....	None..	do...	Good.....	None..	None.....	None.
70	.....	None..	do...	Very good.	None..	do.....	Do.
81	.....	None..	Good..	Good.....	None..	do.....	Do.
76	.....	None..	Fair...	Fair.....	None..	do.....	Do.

1 No record.

TABLE 16.—*Extracts from inspections of Field Artillery*

State or District.	Armory.						What artillery target practice (not revolver) held during the calendar year 1915?	Care of Federal Property	
	Ownership.	Is it adequate for the instruction of the firing battery?	Is it provided with facilities for subcaliber practice?	Is it such as to encourage enlistments?	Does it contain facilities for mounted instruction?	What stable accommodations exist (figures represent number of horses)?		Is all property properly stored and cared for?	Is a competent caretaker provided?
Indiana:									
Headquarters First Battalion.	Private.....	.....	No..	Yes.	No..	(1)	None.	Yes.	Yes.
Battery A.....	.....do.....	No..	No..	No..	No..	(1)	Yes.	Yes.	Yes.
Battery B.....	.....	.....	.....	.....	.....	30	Yes.	No..	Yes.
Battery C.....	.....	.....	.....	.....	.....	30	Yes.	No..	Yes.
Iowa:									
Headquarters First Battalion.	Private.....	.....	.....	Yes	No..	None.	None	Yes.	Yes.
Battery A.....	.....do.....	Yes.	No..	Yes.	No..	15	Yes.	Yes.	Yes.
Battery B.....	City.....	No..	No..	No..	No..	15	Yes.	Yes.	Yes.
Battery C.....	Private.....	No..	No..	Yes.	No..	Excellent.	Yes.	No..	Yes.
Kansas:									
Battery A.....	.....do.....	No..	No..	Yes.	No..	40	Yes.	Yes.	Yes.
Louisiana:									
Headquarters First Battalion.	Private.....	Yes.	Yes.	No..	No..	None	.....	Yes.	No..
Battery A.....	.....do.....	Yes.	Yes.	No..	No..	None	Yes.	Yes.	Yes.
Battery B.....	.....do.....	Yes.	Yes.	No..	No..	None	.....	Yes.	Yes.
Battery C.....	.....do.....	Yes.	Yes.	No..	No..	None	.....	Yes.	Yes.
Maryland:									
Battery A.....	State.....	No..	No..	Yes.	No..	None	None	No..	No..
Massachusetts:									
Headquarters First Battalion.	.....do.....	Yes.	Yes.	Yes.	Yes.	120	Yes.	Yes.	Yes.
Battery A.....	.....do.....	Yes.	Yes.	Yes.	Yes.	120	Yes.	Yes.	Yes.
Battery B.....	.....do.....	Yes.	Yes.	Yes.	No..	None	Yes.	Yes.	Yes.
Battery C.....	.....do.....	No..	No..	Yes.	No..	16	Yes.	Yes.	Yes.
Headquarters Second Battalion.	.....do.....	Yes.	No..	Yes.	No..	32	None	Yes.	Yes.

1 State fair grounds.

organizations under section 14, militia law—Continued.

Drill and instruction.					Horses.		
Average number attending drills.	How many men qualified during the calendar year as—		Degree of proficiency of special details in indoor drills.	Efficiency of organization in armory instruction.	Number continuously available for instruction.	How and to what extent are they provided for mounted instruction other than at annual encampments?	To what extent are mounted drills held?
	First-class gunners?	Second-class gunners?					
9	None..	None..	Good..	Good.....	12	Use 12 horses of Battery A.	Weekly.
39	None..	None..	Poor..	Fair.....	12	Individual instruction with new horses recently commenced.	Twice a week.
102	None..	None..	Fair...	Good.....	19	Use of horses now assigned to battery.	Daily.
60	None..	None..	.....	.....	19	Use of new horses.....	Do.
.....	.....	None..	Good..	.....	None..	None.....	None.
69	None..	2	Very good.	Very good.	11	11 horses available for section drill.	Section drill weekly.
93	None..	None..	...do...	...do.....	10	Drill Sundays with 10 horses of battery and 12 hired horses; harnessing, etc., every drill night.	None.
.....	None..	None..	Good..	Fair.....	10	Sundays by hiring extra horses; never in winter; 3 such instructions since September, 1915.	3 instructions since September; never in winter.
37	.....	None..	...do...	Good.....	5	.....	Twice a week, Saturday afternoons and Sunday mornings.
1	None..	None..	Fair...	Fair.....	24	Riding classes by inspector-instructor; individuals riding afternoon; practice marches approximately once a month.	About 1 a month.
16	None..	None	Good..	...do.....	.....	.....	.....
42	None..	None..	...do...	...do.....	.....	.....	.....
(2)	None..	None..	Fair...	...do.....	.....	.....	.....
.....	None..	None..	.....	Good.....	None..	.....	.....
13	None..	None..	Excellent.	Excellent.	25	Horses are continuously available for instruction.	Occasional.
107	27	.....	...do...	...do.....	25	Rough riding Monday; polo Tuesday, Thursday, and Friday; section drill Wednesday and Thursday.	Mounted drill five times a week.
102	None..	None..	...do...	Very good.	None..	None.....	None.
77	None..	None..	Very good.	...do.....	15	Weekly drills mounted with 4 limbers with 2-horse hitch; also section drills, mounted instruction in individual riding.	Weekly.
None..	None..	.....	.....	Fair.....	30	Arrangements will be one 6-hour period weekly and continuous voluntary individual work.	1 drill per week.

118 of these expert first-class gunners.

2 Organized Dec. 24, 1915.

organizations under section 14, militia law—Continued.

Drill and instruction.					Horses.		
Average number attending drills.	How many men qualified during the calendar year as—		Degree of proficiency of special details in indoor drills.	Efficiency of organization in armory instruction.	Number continuously available for instruction.	How and to what extent are they provided for mounted instruction other than at annual encampments?	To what extent are mounted drills held?
	First-class gunners?	Second-class gunners?					
(1)	None..	None..	Fair...	Fair.....	30	Arrangements will be two 6-hour periods tri-weekly and one 2-hour period weekly; also voluntary individual work.	4 drills every 3 weeks.
(1)	None..	None..	do ..	do ..	30	do ..	Do.
	None..	None..	do ..	Fair.....	30	do ..	Do.
3	None..	None..	Poor..	Poor.....	None..	Horse allowance of \$1,000 per year allowed entire battalion.	About 12 drills a year.
43	None..	4	Fair...	Good.....	2	Annual horse hire \$500...	Outdoors when weather permits; 25 drills, average of 2 horses a drill; mounted instruction.
33	(2)	(2)	Poor..	Fair.....	None..	None.....	None.
17	None..	None..	.....	Very good.	None..	do ..	Do.
11	None..	None..	.....	Good.....	None..	do ..	Do.
10	None..	None..	(2)	Poor.....	30	A riding hall at last drill.	Do.
48	None..	None..	(2)	Good.....	30	A riding hall for cold weather; Fort Snelling Reservation for warm weather.	4 times each week.
22	None..	None..	Good..	Poor.....	30	do ..	None.
10	None..	None..	.....	Good.....	None..	None.....	Do.
51	None..	None..	Good..	Fair.....	24	Weekly mounted instruction in suitable riding hall.	Every week.
55	11	None..	do ..	Good.....	24	Same as for battery B....	Do.
125	None..	None..	Poor..	do ..	None..	None.....	None
8	None..	None..	Good..	do ..	9	.....	Instruction in riding under sergeant-instructor of Battery C.
75	.....	None..	Very good.	Very good.	10	.....	Average about 1½ drills a week throughout year.
45	1	1	Good.	Good.....	10	.....	Mounted instruction given twice a week.
50	.....	None..	Very good.	do ..	9	.....	Some mounted instruction nearly every day.
87	None..	None..	Good..	do ..	6	Practically none.....	None except at summer camp.
115	None..	None..	do ..	do ..	29	Mounted instruction platoon drill 3 times a week.	3 times a week.
55	None..	None..	do ..	do ..	21	.....	Weekly.
51	17	1	Very good.	Very good.	30	State allows \$500 per year for hiring horses.	9 since last inspection.

¹ Organized Dec. 24, 1915.² No record.³ None organized.

TABLE 16.—*Extracts from inspections of Field Artillery*

State or District.	Armory.						What artillery target practice (not revolver) held during the calendar year 1915?	Care of Federal property.	
	Ownership.	Is it adequate for the instruction of the firing battery?	Is it provided with facilities for subcaliber practice?	Is it such as to encourage enlistments?	Does it contain facilities for mounted instruction?	What stable accommodations exist (figures represent number of horses)?		Is all property properly stored and cared for?	Is a competent caretaker provided?
New York:									
Headquarters First Field Artillery.	City.....	Yes.	Yes.	Yes.	Yes.	90	Yes.	Yes.	Yes.
Headquarters First Battalion.	.....do.....	Yes.	Yes.	Yes.	Yes.	90	None	Yes.	Yes.
Battery A.....	Private.....	Yes.	No..	Yes.	Yes.	28	Yes.	Yes.	Yes.
Battery B.....	City.....	Yes.	Yes.	Yes.	Yes.	90	Yes.	No..	Yes.
Battery C.....	State.....	No..	Yes.	Yes.	Yes.	None..	Yes.	Yes.	Yes.
Headquarters Second Battalion.	City.....	Yes.	Yes.	Yes.	Yes.	90	Yes.	Yes.	Yes.
Battery D.....	.....do.....	Yes.	Yes.	Yes.	Yes.	90	Yes.	No..	Yes.
Battery E.....	.....do.....	Yes.	Yes.	Yes.	Yes.	90	Yes.	No..	Yes.
Battery F.....	.....do.....	Yes.	Yes.	Yes.	Yes.	90	Yes.	No..	Yes.
Headquarters Second Field Artillery.	.....do.....	Yes.	Yes.	Yes.	Yes.	60	None	Yes.	Yes.
Headquarters First Battalion.	.....do.....	Yes.	Yes.	Yes.	Yes.	60	None	Yes.	Yes.
Battery A.....	.....do.....	Yes.	Yes.	Yes.	Yes.	60	None	Yes.	Yes.
Battery B.....	.....do.....	Yes.	Yes.	Yes.	Yes.	60	None	Yes.	Yes.
Battery C.....	.....do.....	Yes.	Yes.	Yes.	Yes.	60	None	Yes.	Yes.
Headquarters Second Battalion.	.....do.....	Yes.	Yes.	Yes.	Yes.	60	None	Yes.	Yes.
Battery D.....	.....do.....	Yes.	Yes.	Yes.	Yes.	55	Yes.	Yes.	Yes.
Battery E.....	.....do.....	Yes.	Yes.	Yes.	Yes.	60	Yes.	Yes.	Yes.
Battery F.....	.....do.....	Yes.	Yes.	Yes.	Yes.	60	None	Yes.	Yes.
Ohio:									
Headquarters First Battalion.	(¹).....	(²)	(²)	(²)	(²)	44	Yes.	Yes.	Yes.
Battery A.....	County.....	Yes.	No..	Yes.	No..	None..	Yes.	Yes.	Yes.
Battery B.....	Private.....	Yes.	No..	No..	No..	None..	None	No..	Yes.
Battery C.....	(²).....	(²)	(²)	(²)	(²)	44	None	Yes.	Yes.
Oregon:									
Battery A.....	County.....	Yes.	No..	Yes.	No..	Excellent.	Yes.	Yes.	Yes.
Pennsylvania:									
Battery A.....	Organization....	Yes.	No..	Yes.	No..	39	Yes.	Yes.	Yes.
Battery B.....	State.....	Yes.	No..	Yes.	No..	None..	Yes.	No..	Yes.
Battery C.....	.....do.....	Yes.	No..	Yes.	No..	Rent..	Yes.	Yes.	Yes.
Battery D.....	.....do.....	No..	No..	Yes.	No..	Rent..	Yes.	Yes.	Yes.
Battery E.....	.....do.....	No..	No..	Yes.	No..	None..	None	Yes.	Yes.
Battery F.....	.....do.....	No..	No..	Yes.	No..	None..	None	Yes.	No..
Rhode Island:									
Battery A.....	.....do.....	Yes.	Yes.	Yes.	Yes.	90	Yes.	Yes.	Yes.

¹ No examination.

² No armory; drill held on 11-acre field the year around.

organizations under section 14, militia law—Continued.

Drill and instruction.					Horses.		
Average number attending drills.	How many men qualified during the calendar year as—		Degree of proficiency of special details in indoor drills.	Efficiency of organization in armory instruction.	Number continuously available for instruction.	How and to what extent are they provided for mounted instruction other than at annual encampments?	To what extent are mounted drills held?
	First-class gunners?	Second-class gunners?					
19	1	None..	.....	Fair.....	76	Drills in armory.....	Weekly.
19	1	None..	.....	do.....	76	do.....	Do.
91	9	2	Good..	Good.....	41	do.....	Do.
73	2	3	Fair...	Fair.....	76	do.....	Do.
77	(1)	(1)	do...	Good.....	33	do.....	Do.
19	1	None..	.....	Fair.....	76	do.....	Do.
85	None..	3	Good..	Good.....	76	do.....	Do.
112	2	None..	do...	do.....	76	do.....	Do.
90	2	3	Very good.	do.....	76	do.....	Do.
13	.....	.....	Good..	do.....	56	Drills in armory and weather permitting, outdoors Sundays and holidays.	Do.
6	.....	.....	Poor..	Fair.....	56	do.....	Do.
61	2	.....	Fair...	do.....	57	do.....	Do.
74	7	2	Poor..	Good.....	57	do.....	Do.
91	1	.....	do...	Poor.....	56	do.....	Do.
13	.....	.....	do...	Fair.....	40	Daily during drill season	Biweekly.
88	None..	None..	do...	do.....	49	Continuous mounted drill during year.	Weekly.
103	(1)	(1)	Good..	do.....	49	Drill in armory and road marches.	Do.
68	(1)	(1)	Fair...	do.....	49	Weekly drills.....	Do.
10	None..	None..	Very good.	Good.....	20	State allows \$18 per year per man present at Federal inspection.	Do.
20	2	1	Good..	do.....	1	do.....	4 mounted drills and 5 tactical rides.
89	None..	None..	(1)	Fair.....	None..	do.....	None.
30	None..	None..	Good..	Good.....	20	Weekly in cold weather; semiweekly in warm.	Practice marches once a month, and 2 hours once a week in warm weather.
72	None..	None..	do...	do.....	26	Every Sunday.....	Weekly, weather permitting.
103	(1)	(1)	Very good.	Very good.	32	Every Saturday and Sunday; equitation rides of 2 days' duration at irregular intervals.	Twice weekly, weather permitting.
46	None..	None..	Fair...	Fair.....	None..	None.....	None.
41	None..	None..	do...	do.....	10	Equitation throughout week as men desire it.	Do.
(4)	3	1	do...	do.....	10	No regular instruction...	Do.
None..	.....	.....	(4)	do.....	None..	None.....	
34	.....	.....	(*)	do.....	None..	.....
109	37	9	Excellent.	Excellent.	36	Large riding ring constantly available; frequent outdoor mounted drill.	Twice per week.

*None organized.

*No record.

TABLE 16.—*Extracts from inspections of Field Artillery*

State or district.	Armory.							Care of Federal property.	
	Ownership.	Is it adequate for the instruction of the firing battery?	Is it provided with facilities for subcaliber practice?	Is it such as to encourage enlistments?	Does it contain facilities for mounted instruction?	What stable accommodations exist (figures represent number of horses)?	What artillery target practice (not revolver) held during the calendar year 1915?	Is all property properly stored and cared for?	Is a competent caretaker provided?
Texas: Battery A.....	Organization.....	Yes..	No..	Yes..	Yes..	None	Yes..	No..	No..
Utah: First Battery.....	Private.....	Yes..	No..	Yes..	No..	150	Yes..	Yes..	Yes..
Virginia: Headquarters First Battalion.	City.....	Yes..	No..	Yes..	No..	None	None	Yes..	Yes..
Battery A.....	do.....	Yes..	No..	Yes..	No..	16	None	Yes..	Yes..
Battery B.....	do.....	Yes..	No..	Yes..	No..	Rent	Yes..	Yes..	Yes..
Battery C.....	do.....	No..	Yes..	No..	No..	None	None	Yes..	Yes..
Battery D.....	Private.....	Yes..	No..	No..	Yes..	18	None	Yes..	Yes..
Wisconsin: Battery A.....	State	Yes..	No..	No..	Yes..	30	Yes..	Yes..	Yes..

BLE 17.—Statement showing t.

	Cups.	Currycombs.	Feed bags.	First-aid pouches.	Forks.
				220	5
		9		1	
				195	
16	24			354	
		4			
		5		219	
				153	
		4		72	
		3	3	19	
		173	83		
	106	9	8	56	
16	130	207	94	1,280	5

organizations under section 14, militia law—Continued.

Drill and instruction.					Horses.		
Average number attending drills.	How many men qualified during the calendar year as—		Degree of proficiency of special details in indoor drills.	Efficiency of organization in armory instruction.	Number continuously available for instruction.	How and to what extent are they provided for mounted instruction other than at annual encampments?	To what extent are mounted drills held?
	First-class gunners?	Second-class gunners?					
(1)	3	1	Very good.	Fair.....	None..	Horses hired five times for harness drill.	None.
78	29	4	...do...	Very good.	None..	4 or 5 days' mounted work (10 horses provided).	4 or 5 days annually.
14	None..	None..	.....	Good.....	None..	None.....	None.
71	4	None..	Fair...	Very good.	16	Practice marches.....	Do.
51	11	None..	Very good.	Good.....	11	Weekly to extent of animals (allotted \$500 per year for horse hire).	2 practice marches and 1 parade.
51	None..	None..	Poor..	Fair.....	None..	\$500 per year allotted for horse hire.	3 practice marches and 3 mounted drills.
120	.....	.....	None..	Good.....	10	Little of school of soldier mounted held on borrowed horses.	None.
56	None..	None..	Good...	...do.....	28	Saturdays and Sundays.	7 hours per week, weather permitting.

¹No record.

TABLE 18.—Statement of gross expenditures under section 1661, Revised Statutes, made accounts

State, Territory, or District.	Pay.	Transportation.	Horse hire and forage.	Subsistence.	Incidentals.	Excess expenses of inspecting officers.	Acquiring and developing rifle ranges.
Alabama.....	\$21,393.30	\$7,616.70					
Arizona.....	9,064.77			\$680.75		\$79.25	
Arkansas.....	15,215.21	7,908.55		3,173.77	\$2,510.10		
California.....	11,144.25	4,157.60	\$1,818.00		483.46		
Colorado.....	1,331.98			105.00			
Connecticut.....	13,506.07	582.10		169.26		146.39	
Delaware.....	5,567.53	398.75		838.75		5.41	\$236.50
District of Columbia.....	19,571.72	197.64		244.95		6.51	
Florida.....	14,142.91			1,531.85	53.33	54.92	
Georgia.....	4,789.98	2,167.92		412.05	28.00		
Hawaii.....	3,148.55	3,216.06		462.00	45.00		
Idaho.....	5,414.76	6,409.71	305.88	464.00	297.00		
Illinois.....	26,507.05					19.06	
Indiana.....	20,856.79	8,383.82	3,383.00	3,694.49	859.36	60.94	60.92
Iowa.....	32,639.17	4,353.72	3,130.00	4,697.69	918.40		
Kansas.....	20,083.95	5,268.45	1,449.00	4,061.19	730.26	44.18	
Kentucky.....	27,851.64	10,816.53	1,343.62	5,097.96	967.59	93.07	265.82
Louisiana.....	14,797.28	6,862.72	959.29	3,353.75	1,164.42	27.86	
Maine.....	10,054.78	2,723.04		1,871.25		58.92	
Maryland.....	14,910.63	1,801.99	984.00		230.22		
Massachusetts.....	37,626.32	22,015.22	10,911.41	11,781.00	2,006.60		
Michigan.....	14,006.41	8,834.44	7,071.37	5,378.66	117.26		
Minnesota.....	23,267.92	5,331.02	2,014.00		1.00		
Mississippi.....	15,121.46	11,259.87	321.49	3,808.35	870.80	54.43	
Missouri.....	24,680.46	8,880.05	4,420.00	5,139.16	841.77	89.57	
Montana.....	3,025.17	43.35	10.00	411.80	34.75		
Nebraska.....	9,983.48	1,276.46	1,376.00	2,229.25			
Nevada ¹							
New Hampshire.....	2,778.69	2,159.62	4,662.98	10.50	61.00	3.96	
New Jersey.....	5,729.08	2,083.10		574.00		41.69	
New Mexico.....	6,195.45	1,520.57	438.00	621.64	418.90		352.76
New York.....	69,354.80	18,349.00	42,915.37	11,855.86	3,660.85	326.13	
North Carolina.....	20,954.17	11,009.79		5,137.16	107.97		
North Dakota.....	1,572.58	312.35		39.40			
Ohio.....	50,849.93	3,236.88	6,635.00	112.16		412.33	67.82
Oklahoma.....	13,928.76	5,906.35	1,803.85	713.71	376.40		
Oregon.....	7,612.17						
Pennsylvania.....	2,133.72	44,865.80	22,173.20	16,887.44	12,567.24	192.25	
Rhode Island.....	4,453.70	793.83	4,890.06	507.76	71.53		
South Carolina.....	18,389.96	7,245.96	931.14	4,684.75	206.42	132.27	
South Dakota.....	10,464.81	4,262.94	938.80	1,681.94	120.55	3.73	
Tennessee.....	19,744.81	4,946.01		2,767.67	311.83		29.50
Texas.....	1,526.09	12,967.60				111.90	
Utah.....	5,732.78	1,689.45	646.10				
Vermont.....	7,552.06	215.30		81.00			
Virginia.....	20,535.80	7,168.60	700.75	1,114.08	1,135.48		14.18
Washington.....	15,632.17	5,606.56	4,433.50	3,664.91	105.00	14.86	1.00
West Virginia.....	15,984.68	7,809.49	419.57	3,915.15	500.52	46.13	
Wisconsin.....	12,125.58	15,322.50	3,388.93	5,470.00	257.32	27.12	
Wyoming.....	5,761.78	1,379.85		246.04	24.00		82.00
Total.....	\$738,717.11	\$289,387.26	\$134,474.30	\$119,684.10	\$32,084.33	\$2,062.88	\$1,110.80

¹ No Organized Militia (mustered out May 20, 1906).

by disbursing officers for the Organized Militia during the fiscal year 1916, as shown by the current.

Shooting galleries.	Civilian markers and scorers.	Entrance fees.	Prizes.	Purchase rifle ranges.	Rent rifle ranges.	Care-taker.	Construction and improvements (labor and material).	Miscellaneous rifle practice.	Total.
									\$29,010.00
								\$319.00	10,148.77
								2,782.75	31,590.38
	\$1,319.00					\$1,020.00	\$356.68	8.00	20,306.99
									1,436.98
						70.00			14,473.82
	191.75					178.33	1,571.25	25.88	9,014.15
	4,207.14		\$727.00		\$2,625.00	100.00	504.73		28,184.69
		\$330.00	178.50						16,291.51
	1,484.49		204.80		750.00	3,038.00	4,048.71	438.25	17,302.20
							499.50	187.00	7,558.11
					100.00		431.13		13,422.48
	12,046.40	1,616.74				2,570.50		1,629.35	44,389.10
\$60.28		281.00	75.00		2,730.67		1,369.00		41,815.27
				\$10,640.00		500.00		5.50	56,884.48
	230.00				1,155.50		874.06	320.38	34,206.97
	654.00		303.50		1,248.28		4,225.28	298.82	53,166.11
588.05	221.50				466.66		240.65	163.21	28,835.39
	400.00		194.00		140.00	724.00	615.00	104.00	16,884.99
	2,604.00					326.66	212.00		21,069.50
		462.00	570.00					410.00	85,782.55
	578.75			200.00	270.00	1,448.00	8,435.37	300.59	46,640.85
1,434.00	663.00	395.00				180.00	260.00		33,545.94
	321.25					668.00	640.60		33,066.25
	135.15				175.00	890.00	2,658.83	44.04	47,934.03
	156.00		260.00				62.50	228.50	4,232.07
				19,718.00					34,583.19
	1,550.00					60.00	650.05		11,936.80
	4,516.50	177.00				205.33	662.00		13,988.70
						54.90			9,602.22
					4,961.87	2,000.00	3,549.50		156,973.38
			213.50	705.85	220.00	120.00	2,304.87		40,773.31
					35.00		69.36		2,028.69
	76.00				1,315.00		957.69		63,662.81
		26.00					84.50		22,839.57
	485.50				400.00	527.50			9,025.17
	12,833.17				3,235.00	4,243.26	4,292.66		123,423.74
	1,766.88					310.00			12,793.75
					898.16	160.00	1,714.94	226.00	34,589.60
					35.00		277.59	1.50	17,786.86
35.42	640.00	465.25	240.00		25.00		496.18		29,701.67
					944.00				15,549.59
	784.00				260.00		195.00		9,307.33
			433.45						8,311.81
					155.06	505.00	2,512.66	52.88	33,894.49
	831.00				350.00	420.00	2.70		31,153.70
	112.00	240.00			552.00	273.33	2,255.15		32,108.02
				7,662.00	350.00		3,853.94	338.00	48,795.39
	14.00	278.50			50.00		237.00		8,073.17
\$2,117.75	\$48,821.48	\$4,271.49	\$3,399.75	\$38,925.85	\$23,447.20	\$20,592.81	\$51,121.08	\$78,83.65	\$1,518,091.54

TABLE 19.—Statement of issues of military stores, funds to credit of disbursing officers, and charges for lost property pertaining to the States, the Territory of Hawaii, and the District of Columbia, under section 1661, Revised Statutes, for the fiscal year 1916.

State, Territory, or District.	Amount to credit of State.			Value of issues, fiscal year 1916.						
	Balance July 1, 1915.	Allotment for fiscal year 1916.	Credit from miscellaneous purposes.	Total amount available for fiscal year 1916.	Quartermaster.	Ordnance.	Signal.	Engineers.	Medical.	Publications.
Alabama.....	\$17,440.55	\$43,067.27	.....	\$60,507.82	\$153.49	\$4,563.95	\$19.50	\$2.07	\$9.53	\$584.01
Arizona.....	1,419.46	10,766.82	.....	12,186.28	3,049.23	144.89	.....	.....	33.38	164.81
Arkansas.....	6,464.74	32,300.45	.....	38,765.19	6,160.66	5,466.75	152.64	381.30	173.24	728.31
California.....	13,473.56	46,656.21	\$287.07	60,416.84	2,195.47	14,250.50	175.99	4.85	225.14	837.30
Colorado.....	3,949.62	21,533.63	.....	25,483.25	13,667.76	6,304.52	134.62	82.57	945.81	623.66
Connecticut.....	13,579.41	25,122.57	.....	38,701.98	6,928.52	6,189.16	26.21	.....	84.44	1,275.99
Delaware.....	3,036.15	10,766.82	.....	13,802.97	17.81	732.19	.....	.....	.....	139.69
District of Columbia.....	2,413.83	37,070.88	.....	39,484.71	7,459.76	2,901.15	2.75	.....	.....	430.95
Florida.....	\$142.38	21,533.63	.....	21,391.25	923.14	2,728.68	920.44	.....	126.35	368.71
Georgia.....	\$870.81	50,245.15	.....	49,374.34	2,530.19	7,831.33	357.17	.....	329.66	2,142.26
Hawaii.....	2.90	14,722.49	.....	14,725.39	79.85	6,659.17	.....	.....	.....	466.62
Idaho.....	634.55	14,355.76	.....	14,990.31	104.55	672.69	.....	17.05	.....	198.08
Illinois.....	4,016.80	104,079.22	.....	108,096.02	33,697.14	19,576.11	46.59	1,027.44	53.35	2,460.86
Indiana.....	28,977.67	53,834.09	.....	82,811.76	802.67	6,133.59	298.09	.....	4.96	601.08
Iowa.....	26,415.24	46,656.21	.....	73,071.45	3,556.80	2,216.02	.....	.....	.....	606.00
Kansas.....	8,960.21	35,889.39	\$84.00	44,933.60	419.57	2,513.18	.....	.....	.....	690.63
Kentucky.....	13,746.19	46,656.21	.....	60,402.40	111.49	5,192.21	.....	.....	.....	488.06
Louisiana.....	41,880.93	35,889.39	.....	77,770.32	5,309.23	3,775.00	69.30	.....	192.43	373.47
Maine.....	1,881.00	21,533.63	.....	23,414.63	509.26	5,582.00	43.38	.....	60.00	256.10
Maryland.....	.....	28,711.51	\$216.49	28,928.14	3,830.89	5,228.17	.....	.....	2.41	529.10
Massachusetts.....	81,531.15	64,600.90	\$12.75	146,144.80	28,695.39	31,792.82	636.26	116.25	991.30	1,110.74
Michigan.....	8,086.18	53,834.09	.....	61,920.27	928.95	6,940.90	27.95	.....	314.80	819.85
Minnesota.....	13,828.16	43,067.27	.....	56,895.43	1,287.02	11,440.75	88.38	362.70	321.49	674.06
Mississippi.....	3,961.95	35,889.39	.....	39,851.34	2,767.26	2,521.56	92.04	195.30	159.90	233.11
Missouri.....	37.50	64,600.90	.....	64,638.40	178.07	1,965.67	7.50	.....	.....	1,056.16
Montana.....	1,965.08	14,355.76	.....	16,320.84	612.49	8,784.29	3.60	80.60	.....	245.03
Nebraska.....	20,760.35	28,711.51	\$5.45	49,477.31	2,479.37	1,144.69	90.00	.....	1.35	678.79
Nevada.....	.....	10,766.82	.....	10,766.82	.....	.....	.....	.....	.....	.....
New Hampshire.....	4,650.38	14,355.76	.....	19,006.14	802.78	1,668.01	64.88	.....	.....	475.79
New Jersey.....	8,066.50	50,245.15	.....	58,311.65	25,724.58	12,278.42	28.03	.....	1.17	1,015.44
New Mexico.....	3,233.53	10,766.82	.....	14,000.35	494.97	2,111.81	.....	.....	.....	201.94
New York.....	53,928.70	161,502.25	.....	215,430.95	32,715.57	37,726.97	167.90	3.20	13.10	3,253.92
North Carolina.....	5,240.71	43,067.27	.....	48,308.98	46.44	4,230.13	.....	.....	15.19	505.00
North Dakota.....	160.58	17,944.70	.....	18,114.28	3,198.29	6,103.40	20.56	.....	209.58	292.67
Ohio.....	6,755.93	86,134.53	.....	92,890.46	15,749.38	8,041.32	285.95	59.94	842.24	1,058.10
Oklahoma.....	25,619.76	35,889.39	.....	61,509.15	891.53	7,715.58	115.27	127.10	231.90	529.17
Oregon.....	\$273.44	17,944.70	.....	17,671.26	21.96	5,319.35	31.94	130.20	.....	204.41
Pennsylvania.....	1,088.72	136,379.67	.....	137,468.39	1,003.08	8,218.31	.....	.....	.....	1,665.79

Rhode Island.....	899.83	17,944.70	.....	18,844.53	2,371.44	2,880.25	.....	.....	1.30	364.33
South Carolina.....	19,152.68	32,300.45	.....	51,453.13	100.76	3,610.39	.....	.....	9.22	408.65
South Dakota.....	36.41	17,944.70	.....	17,908.29	72.94	3,536.00	.....	.....	.....	379.07
Tennessee.....	26,296.48	43,067.27	.....	69,363.75	10,219.20	4,416.97	.....	.....	345.55	507.69
Texas.....	23,549.82	71,778.77	884.30	96,212.89	1,788.54	2,432.63	.....	48.05	.....	656.97
Utah.....	892.49	14,355.76	.....	15,248.25	1,990.45	2,997.65	.....	62.00	.....	192.15
Vermont.....	698.78	14,355.76	.....	15,054.54	151.19	7,502.80	.....	.....	100.00	268.36
Virginia.....	2,725.56	43,067.27	.....	45,792.83	4,288.21	7,103.49	.....	.....	23.04	1,370.50
Washington.....	8,428.48	25,122.57	.....	33,551.05	263.34	3,914.69	.....	.....	79.26	503.51
West Virginia.....	12,374.58	28,711.51	.....	41,086.09	339.35	4,875.85	.....	.....	221.68	420.91
Wisconsin.....	1,546.17	46,656.21	.....	48,202.38	2,424.49	4,616.49	.....	9.80	1.04	545.95
Wyoming.....	3,185.91	10,766.82	.....	13,952.73	154.24	138.54	.....	.....	.....	369.23
Total.....	\$525,693.87	\$1,957,520.00	\$1,490.06	\$2,484,703.93	\$233,244.76	\$314,690.99	\$4,385.67	\$2,709.92	\$6,123.81	\$33,972.98

1 Recredits.

2 Transferred from "Encampment and maneuvers, Organized Militia."

3 Overdraft.

4 Transferred from appropriation "Shooting galleries and ranges."

5 Refunded by railroad.

6 Turned in to "Surplus funds."

TABLE 19.—Statement of issues of military stores, funds to credit of disbursing officers, and charges for lost property pertaining to the States, the Territory of Hawaii, and District of Columbia, under section 661, Revised Statutes, for fiscal year 1916.—Continued.

State, Territory, or District.	Funds placed to credit of disbursing officer, less re-fundments to personal credit.	Charges for property lost and unaccounted for.	Miscellaneous.	Total value of expenditures.	Balance to credit of State, June 30, 1916.	Credit of disbursing officer as reported on accounts current.		Total amount available on June 30, 1916.
						July 1, 1916.	June 30, 1916.	
Alabama.....	\$29,839.67	\$23,000.00	.....	\$68,172.22	\$2,335.60	\$1,940.33	\$2,780.20	\$5,115.80
Arizona.....	8,700.00	.....	.....	12,092.31	93.97	2,863.67	1,618.00	1,711.97
Arkansas.....	29,018.46	13,316.17	.....	38,765.19	.....	2,680.04	108.96	108.96
California.....	12,744.42	10,831.11	.....	41,264.78	19,162.06	12,692.82	5,309.25	24,461.31
Colorado.....	912.11	.....	.....	22,671.05	2,812.20	391.41	.....	2,812.20
Connecticut.....	21,075.94	350.41	.....	35,930.67	2,771.31	2,706.92	9,363.06	12,124.97
Delaware.....	8,350.00	.....	.....	9,239.69	4,563.28	1,114.53	668.71	5,239.99
District of Columbia.....	27,787.53	339.24	.....	38,921.38	563.33	872.92	842.89	1,406.22
Florida.....	15,923.46	53.15	.....	21,043.93	347.32	350.59	.....	347.32
Georgia.....	20,732.78	87.31	.....	34,010.70	15,363.64	1,701.33	5,241.91	20,606.55
Hawaii.....	7,491.90	20.08	.....	14,717.62	7.77	60.71	.50	8.27
Idaho.....	13,997.94	.....	.....	14,990.31	.....	1,109.50	.....	.....
Illinois.....	38,670.23	12,448.62	.....	107,980.34	115.68	6,533.39	2,480.94	2,596.62
Indiana.....	53,163.50	433.36	.....	61,437.25	21,374.51	8,317.63	20,012.91	41,387.42
Iowa.....	56,627.40	562.64	.....	63,568.86	9,502.59	408.08	250.00	9,752.59
Kansas.....	40,303.27	964.10	.....	44,890.75	42.85	.....	7,624.18	7,667.03
Kentucky.....	52,351.87	2,194.88	.....	60,338.51	63.89	1,604.22	7,792.72	866.61
Louisiana.....	25,333.84	.....	.....	35,053.27	42,717.05	.....	.....	42,717.05
Maine.....	16,039.14	4.14	.....	22,494.02	920.61	2,012.27	1,627.28	2,547.89
Maryland.....	18,692.13	19.30	.....	28,302.00	626.14	1,885.77	1,593.23	2,219.37
Massachusetts.....	81,109.48	185.08	.....	144,637.32	1,507.48	17,283.11	13,838.08	15,345.56
Michigan.....	52,634.24	.....	.....	61,606.69	253.58	.....	6,241.16	6,494.74
Minnesota.....	40,022.65	6.08	.....	54,203.13	2,692.30	3,622.93	11,330.90	14,023.20
Mississippi.....	33,790.43	17.52	.....	39,742.08	109.26	.....	2,037.02	2,146.28
Missouri.....	48,400.00	3,267.47	.....	54,874.87	9,763.53	4,959.75	5,481.18	15,244.71
Montana.....	5,500.00	.....	.....	15,228.01	1,094.83	2,809.15	4,385.08	5,479.91
Nebraska.....	33,141.79	282.83	.....	37,818.82	11,658.49	11,437.58	9,994.16	21,652.65
Nevada.....	.....	.....	* 10,766.82	10,766.82	.....	.....	.....	.....
New Hampshire.....	14,652.50	55.00	.....	17,718.96	1,287.18	8,479.00	11,194.70	12,481.88
New Jersey.....	18,681.08	.....	.....	67,728.72	582.93	1,280.31	5,999.13	6,582.06
New Mexico.....	10,125.00	188.35	.....	13,072.07	928.28	.....	858.69	1,786.97
New York.....	124,925.10	2,605.83	.....	201,411.59	14,019.36	39,148.28	7,100.00	21,119.36
North Carolina.....	39,223.84	4,144.95	.....	48,165.55	191.43	1,791.07	1,005.60	1,197.03
North Dakota.....	8,000.00	1,700.26	.....	17,124.24	990.04	1,581.15	7,552.46	8,542.50
Ohio.....	65,749.35	1,099.92	.....	92,876.20	14.26	.....	2,097.54	2,111.80
Oklahoma.....	21,764.30	58.81	.....	31,419.66	30,096.49	.....	.....	30,096.49
Oregon.....	8,670.41	2,980.53	.....	17,369.80	301.46	467.20	.....	301.46
Pennsylvania.....	126,151.75	.....	.....	137,045.93	422.46	.....	10,655.25	11,077.71
Rhode Island.....	13,045.09	31.59	.....	18,694.00	150.53	.....	601.35	751.88

South Carolina.....	47,318.75	.....	.....	51,452.77	.....	.....	.....	.....	.....	.....	.....	.....
South Dakota.....	13,604.03	.....	.....	17,840.43	.....	.....	.....	.....	.....	.....	.....	.....
Tennessee.....	53,604.61	.....	.....	69,302.61	.....	.....	.....	.....	.....	.....	.....	.....
Texas.....	18,813.50	.....	.....	83,768.09	.....	.....	.....	.....	.....	.....	.....	.....
Utah.....	7,963.29	.....	.....	14,490.37	.....	.....	.....	.....	.....	.....	.....	.....
Vermont.....	6,510.04	.....	.....	14,534.14	.....	.....	.....	.....	.....	.....	.....	.....
Virginia.....	31,924.86	.....	.....	44,756.70	.....	.....	.....	.....	.....	.....	.....	.....
Washington.....	26,942.91	.....	.....	33,535.75	.....	.....	.....	.....	.....	.....	.....	.....
West Virginia.....	34,404.33	.....	.....	41,085.89	.....	.....	.....	.....	.....	.....	.....	.....
Wisconsin.....	40,356.78	.....	.....	48,076.78	.....	.....	.....	.....	.....	.....	.....	.....
Wyoming.....	9,482.88	.....	.....	10,082.49	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	\$1,534,415.58	\$126,056.80	\$10,766.82	\$2,266,367.33	\$218,336.60	\$179,979.61	\$210,529.54	\$428,866.14				

TABLE 20.—Statement of issues to the States, the Territory of Hawaii, and the District of Columbia of armament and equipment under section 13 of the militia law (act of May 27, 1908), fiscal year 1916.

State, Territory, or District.	Value of issues, fiscal year 1916.					Total.
	Quarter-master.	Ordnance.	Signal.	Engineers.	Medical.	
Alabama.....	\$29,838.22	\$13,464.94	\$1,762.12	\$320.85	\$617.35	\$46,003.48
Arizona.....	5,926.15	.....	.....	.....	10.00	5,936.15
Arkansas.....	9,907.58	2,128.60	91.08	.....	592.84	12,720.10
California.....	28,524.52	18,470.28	626.29	279.00	440.52	48,340.61
Colorado.....	14,344.33	4,756.77	238.00	.....	.....	19,339.10
Connecticut.....	57,766.05	16,188.66	3,115.86	93.59	2,077.02	79,241.18
Delaware.....	1,622.20	1,477.68	24.96	74.40	100.45	3,299.69
District of Columbia.....	23,986.44	15,137.83	1,969.62	158.10	218.70	41,470.69
Florida.....	9,860.60	2,651.75	.....	.....	.....	12,512.35
Georgia.....	32,010.09	17,264.16	622.74	9.20	14.67	49,920.86
Hawaii.....	26,543.78	42,826.56	102.76	120.90	267.78	69,761.78
Idaho.....	8,046.52	1,671.18	7.08	.....	26.57	9,751.35
Illinois.....	79,270.67	32,612.24	1,875.33	22.65	4,502.78	118,283.67
Indiana.....	25,846.66	3,783.35	3,588.55	387.50	572.85	34,178.91
Iowa.....	24,984.59	14,660.46	965.73	40.62	1,231.54	41,882.94
Kansas.....	21,172.76	14,870.18	7,245.20	10.50	497.13	43,795.77
Kentucky.....	19,764.08	1,584.04	201.60	362.70	247.14	22,159.56
Louisiana.....	7,418.49	3,841.29	134.59	9.30	120.88	11,524.55
Maine.....	10,524.81	3,698.94	218.20	130.20	418.44	14,990.59
Maryland.....	19,540.73	15,267.52	662.97	9.30	84.14	35,564.66
Massachusetts.....	69,964.07	10,417.00	1,428.00	40.62	2,787.20	84,636.89
Michigan.....	21,320.49	29,391.81	281.26	81.77	3,891.18	54,966.51
Minnesota.....	19,217.28	17,173.45	1,768.00	.....	190.40	38,349.13
Mississippi.....	10,075.70	.....	.....	.....	.....	10,075.70
Missouri.....	15,534.98	17,838.98	1,387.86	555.22	474.60	35,791.64
Montana.....	4,637.58	992.33	33.84	65.10	132.00	5,860.85
Nebraska.....	14,678.19	858.66	.....	.....	.....	15,536.85
Nevada ¹.....	.....	.....	.....	.....	.....	.....
New Hampshire.....	12,146.47	3,132.55	390.15	27.90	254.54	15,951.61
New Jersey.....	53,662.27	14,102.04	768.36	.....	2,922.94	71,455.61
New Mexico.....	7,796.91	2,136.87	213.72	.....	105.00	10,252.50
New York.....	145,995.62	123,981.65	2,873.32	2,227.67	5,538.04	280,616.30
North Carolina.....	15,273.22	9,111.73	314.37	361.15	1,328.06	26,388.53
North Dakota.....	7,175.45	291.80	68.00	.....	.....	7,535.25
Ohio.....	95,181.78	41,697.84	1,061.18	1,873.05	96.60	139,910.45
Oklahoma.....	10,561.33	3,783.32	.....	.....	.....	14,344.65
Oregon.....	12,032.54	10,555.93	314.92	.....	71.29	22,974.68
Pennsylvania.....	118,425.00	52,023.80	2,180.31	2,418.75	2,652.84	177,700.70
Rhode Island.....	15,749.93	10,654.18	84.94	27.90	909.26	26,426.21
South Carolina.....	24,819.70	9,312.99	152.80	46.50	1,113.97	35,445.96
South Dakota.....	4,944.71	3,213.55	103.71	158.10	257.35	8,677.42
Tennessee.....	713.83	1,164.30	68.00	.....	1,533.52	3,479.65
Texas.....	15,638.77	5,579.61	585.62	353.40	141.60	22,299.20
Utah.....	6,388.30	3,628.65	209.31	.....	57.80	10,284.06
Vermont.....	9,569.93	1,963.08	.....	.....	865.74	12,398.75
Virginia.....	22,152.71	14,069.34	1,044.14	474.30	17.23	37,777.72
Washington.....	22,718.71	10,593.01	346.08	114.70	354.18	34,126.68
West Virginia.....	12,591.16	6,167.12	136.00	213.90	118.08	19,226.26
Wisconsin.....	19,305.87	21,394.65	414.68	.....	244.36	41,359.56
Wyoming.....	1,815.65	2,231.02	28.08	86.10	501.26	4,662.11
Stop devices, Lewis P. D. finders.....	.....	125.00	.....	.....	.....	125.00
Field glass, type EF.....	.....	.....	34.00	.....	.....	34.00
Total.....	\$1,247,967.42	\$653,962.73	\$39,743.33	\$11,155.04	\$33,600.04	\$1,991,448.56

¹ No Organized Militia (mustered out May 20, 1906).

TABLE 21.—Statement of expenditures made under the appropriation "Care of horses and matériel, Field Artillery, Organized Militia, 1916."

State or District.	Quarter-master supplies.	Funds placed to credit of disbursing officer for compensation of help.	Total.
Alabama.....		00	\$1,300.00
California.....		00	900.00
Colorado.....	\$684.81	00	1,570.81
Connecticut.....	2,319.90	64	6,208.64
District of Columbia.....	2,195.41	50	4,477.91
Georgia.....		00	672.00
Illinois.....	3,461.80	50	8,555.30
Indiana.....	1,468.70	00	3,931.39
Iowa.....	2,029.42	00	5,260.42
Kansas.....	396.10	00	1,584.10
Louisiana.....	1,831.96	00	5,152.96
Maryland.....	167.77	00	287.77
Massachusetts.....	3,924.96	12	8,024.96
Michigan.....	205.40	23	592.73
Minnesota.....	3,297.09	00	10,296.09
Missouri.....	2,238.72	00	6,489.72
New Hampshire.....	115.12	40	453.52
New Jersey.....	2,221.98	00	4,388.98
New Mexico.....	1,599.76	60	3,000.76
New York.....	3,593.92	00	6,713.92
Ohio.....	1,185.13	50	3,203.63
Oregon.....	1,291.29	00	2,484.29
Pennsylvania.....	4,115.11	31	9,238.42
Rhode Island.....	2,935.56	48	5,333.04
Utah.....	120.80	00	670.80
Virginia.....	3,002.68	50	7,125.18
Wisconsin.....	1,665.12	00	3,575.12
Specifications and instructions to bidders for forage and straw for issue to Organized Militia.....	22.77		22.77
Total.....	\$47,081.18	\$61,791.97	\$108,863.15

TABLE 22.—Statement of the expenses of the National Militia Board for the fiscal year 1916.

By allotment.....	\$2,000.00
To expenses of members of the board.....	\$684.85
To transfer to allotment for Militia Bureau for expenses of telegrams sent to States during June, 1916, in connection with mobilization of troops into the Federal service.....	365.91
	<u>1,050.76</u>
Balance on hand June 30, 1916.....	949.24

TABLE 23.—*Statement of the expenses of the Militia Bureau for the fiscal year 1916.*

By allotment for salaries of employees.....	\$37,280.00	
To salaries paid.....	\$37,068.33	
	<hr/>	37,068.33
Balance on hand June 30, 1916.....		211.67
		<hr/>
By allotment for miscellaneous expenses.....		3,200.00
By transfer from allotment for National Militia Board for expenses of telegrams sent to States during June, 1916, in connection with mobilization of troops into the Federal service.....		365.91
		<hr/>
		3,565.91
To furniture and fixtures.....	\$437.14	
To office supplies.....	471.01	
To stationery and supplies.....	561.33	
To printing.....	855.48	
To telegraph service.....	822.42	
To telephone service.....	102.95	
To publications.....	62.75	
To labor and repairs.....	74.42	
To ice.....	7.65	
	<hr/>	3,395.15
Balance on hand June 30, 1916.....		\$170.76

REPORT OF THE CHIEF OF COAST ARTILLERY.

1161

REPORT OF THE CHIEF OF COAST ARTILLERY.

WAR DEPARTMENT,
OFFICE OF THE CHIEF OF COAST ARTILLERY,
Washington, September 20, 1916.

SIR:

I submit herewith my annual report as Chief of Coast Artillery.

The most salient feature bearing on the efficiency of the Coast Artillery Corps, which stands out in relief in the past year, is the fact that, at its last session, Congress enacted practically all the recommendations made by the War Department in legislation proposed, with respect to the requirements of the arm as to increases of personnel and increases of matériel. It may be said that with these increases, and the approving policy indicated by Congress with respect to some additional new batteries needed for certain localities, to meet the increased power of attack of the most recent types of guns mounted on battleships, the coast fortifications will be able to meet successfully any attack that can reasonably be expected to be made upon them, or upon the cities, harbors, or interests which they guard, by the most powerful warships afloat or at present projected. It should be pointed out, however, that this increase in armament entails a small additional increase in the personnel to provide the manning bodies therefor. This additional personnel is indicated in the following table:

	Officers.	Enlisted. men.
United States:		
Twenty-two 16-inch guns.....	62	1,607
Twenty-four 12-inch guns.....	50	1,356
Forty-eight 16-inch mortars.....	54	1,404
Twenty-three 6-inch guns.....	29	727
Four 3-inch guns.....	2	68
Six 16-inch howitzers.....	16	444
One 14-inch gun, movable.....	3	67
Two 4.7-inch guns, movable.....	1	40
One hundred and thirty-four 3-inch anti-aircraft guns.....	71	1,853
	288	7,566
Militia.....	144	3,783
Regulars.....	144	3,783
Insular Possessions:		
Four 16-inch guns.....	12	296
Twelve 12-inch guns.....	25	678
Twelve 16-inch mortars.....	13	351
Twenty-five 3-inch anti-aircraft guns.....	12	327
	62	1,652
Total Regulars.....	206	5,435

The effect of the recent legislation as to personnel is to provide a complete manning body for the gun and mine defenses of the over-sea fortifications and for one-half of the gun defense and all of the mine defense of the home fortifications. The proposed distribution of this personnel, after the last increment of the increase carried in the Act approved June 3, 1916, goes into effect on July 1, 1920, is indicated in the following table:

Proposed distribution of the Coast Artillery Corps (exclusive of 18 bands).

Coast Defenses.	Officers.	Enlisted men.
United States:		
Portland.....	63	1,618
Portsmouth.....	17	392
Boston.....	68	1,787
New Bedford.....	13	229
Narragansett Bay.....	50	1,341
Long Island Sound.....	67	1,539
Eastern New York.....	34	810
Southern New York.....	48	1,403
Sandy Hook.....	33	927
Delaware.....	33	763
Baltimore.....	28	620
Potomac.....	22	512
Chesapeake Bay.....	38	968
Cape Fear.....	15	341
Charleston.....	23	686
Savannah.....	19	436
Key West.....	26	597
Tampa.....	23	461
Pensacola.....	23	558
Mobile.....	17	403
New Orleans.....	17	379
Galveston.....	23	575
San Diego.....	22	413
Los Angeles.....	23	403
San Francisco.....	67	1,999
Columbia.....	33	828
Puget Sound.....	76	2,131
Office Chief of Coast Artillery.....	7	
District staff.....	6	
Total United States.....	934	23,117
Insular Possessions:		
Oahu.....	62	1,533
Manila Bay.....	93	2,470
Cristobal.....	56	1,154
Balboa.....	52	1,195
District staff.....	4	
Total Insular Possessions.....	267	6,352
Total United States and Insular Possessions.....	1,201	29,469

The officers by grades will be as follows:

1,201 total.
 24 colonels.
 24 lieutenant colonels,
 72 majors.
 360 captains.
 360 first lieutenants.
 360 second lieutenants.

1,201 total.

DEFICIENCY IN NATIONAL GUARD COAST ARTILLERY.

Attention is invited to the fact, however, that the policy of the War Department contemplates that one-half of the gun defense of the United States proper shall be provided from the National Guard

of the seaboard States. The experience had up to the present time has not been encouraging in the extent to which the coast States have met their obligations in supplying coast artillerymen for that half of the coast guns set apart to them. The accompanying table will show the number of officers and men of the National Guard Coast Artillery of the seaboard States now provided and the deficiency which exists in this regard:

National Guard Coast Artillery.

State.	Officers.	Enlisted men.
Maine.....	51	843
New Hampshire.....	16	267
Massachusetts.....	51	908
Rhode Island.....	66	1,210
Connecticut.....	53	844
New York.....	124	3,207
New Jersey.....		
Delaware.....		
Maryland.....	3	65
District of Columbia.....	3	75
Virginia.....	3	136
North Carolina.....	22	414
South Carolina.....	19	373
Georgia.....	16	224
Florida.....		
Alabama.....		
Louisiana.....		
Texas.....		
California.....	42	768
Oregon.....	40	887
Washington.....	36	639
Total.....	545	10,860
Required for one-half the gun defense in the United States authorized prior to July 1, 1916.....	711	17,329
Deficiency.....	166	6,469

Unless this deficiency is made up by the States, it will be necessary to consider whether the policy which has heretofore been taken as the guide will not have to be modified with respect to decreasing the quota assigned to each State, and increasing the Regular Coast Artillery by the amount of that decrease.

DETACHMENT OF COAST ARTILLERY OFFICERS AND MEN FROM THE FORTIFICATIONS.

The instruction of the personnel of the Coast Artillery Corps during the past year has been seriously interfered with by the detachment of considerable numbers of officers and men for service on the Mexican border, and also by the necessity for the detachment of officers and men from the coast fortifications for the purpose of assisting in giving instruction to civilians in military duties at the training camps at Plattsburg, N. Y., Tobyhanna, Pa., and Fort Oglethorpe, Ga., in the Eastern Department; and Monterey, Cal., American Lake, Wash., and Fort Douglas, Utah, in the Western Department; also for service as caretaker detachments at vacated mobile army posts.

Twenty per cent of the officers and 22 per cent of the men on duty at the coast fortifications (amounting to 80 officers and 2,912 men)

in continental United States were detached for service on the Mexican border. In addition, there were detached 30 officers and 1,144 men for service with the civilian encampments and as caretaker detachments at mobile army posts in the Eastern Department, and 35 officers and 1,040 men for similar service in the Western Department. These detachments left so few officers and men on duty at the coast fortifications as to make it impracticable to carry out satisfactorily the annual scheme of instruction in any general way, and necessitated the abandonment of a carefully planned scheme of combined coast defense exercises with the Navy on the Atlantic coast.

Notwithstanding the fact that the details to the border and to the training camps interfered with the regular Coast Artillery work for the year, it was understood perfectly that emergency conditions existed, and it was realized that the interests which were served, under the circumstances, were paramount to our normal duties. The personnel was therefore animated by a spirit to assist most cheerfully in every way possible. It is gratifying to know that it has acquitted itself to the satisfaction of the department commanders.

COAST ARTILLERY DISTRICT COMMANDERS.

I desire to renew my recommendation of previous years that the commanding generals of Coast Artillery districts be made a part of the Coast Artillery Corps. For purposes of better administration of the technical requirements of the coast fortifications, and in order that more frequent technical inspections could be made by senior Coast Artillery officers of the training and instruction of the Coast Artillery personnel, a new administrative unit was established on February 15, 1913, called the Coast Artillery District. These districts consist of a grouping of the coast fortifications in such a way as to establish a unit for inspection and general supervision adequate to the capacities as to time and attention of one senior officer. Experience has shown that the effect of the establishment of these higher units has been to produce a better coordination and standardization as to the condition of the matériel and the character of the instruction of the personnel of the several forts which constitute the Coast Artillery district. Up to the present time, two of these Coast Artillery districts have been created on the Atlantic coast line; one, the North Atlantic Coast Artillery District, and the other the South Atlantic Coast Artillery District; and one on the Pacific coast called the Pacific Coast Artillery District. The North Atlantic Coast Artillery District includes all coast forts from Maine down to the defenses of the southern approaches to New York City, inclusive. The South Atlantic Coast Artillery District includes all coast forts from the Coast Defenses of the Delaware to those of Galveston, inclusive. The Pacific Coast Artillery District includes all the coast forts on the Pacific coast. The coast forts of Panama constitute a separate Coast Artillery district.

Coast Artillery districts are subdivisions of territorial department commands. The commanders of the Coast Artillery districts bear the same relation to department commanders that brigade commanders of the mobile army troops in departments bear to department commanders.

The duties of Coast Artillery district commanders are wholly and essentially of a Coast Artillery nature, involving an intimate knowledge of technical matters connected with the installation and use of the guns, mortars, mines, searchlights, and range-finding equipment of coast forts. Only officers can best discharge the functions of Coast Artillery district commanders who have risen to the higher grades of Coast Artillery through service in the lower grades.

The number of officers and troops included in Coast Artillery districts, the magnitude and importance of the interests of the United States involved in maintaining the fighting efficiency of the personnel and matériel located therein has been recognized by the War Department as warranting the assignment of officers of the grade of brigadier general to the command thereof. Accordingly, it has been the custom recently, when officers of the Coast Artillery Corps have been appointed to the grade of brigadier general of the line of the Army, to assign them to command of Coast Artillery districts.

It should be had in mind that in fixing the number of general officers of the line of the Army it was not contemplated that such assignments would be made. This statement will be made clear by appreciation of the fact that the legislation passed by the last Congress provides for 36 brigadier generals of the line of the Army who are required to command the 21 brigades of Infantry, 8 brigades of Cavalry, and 7 brigades of Field Artillery. It therefore follows that when general officers of the line are assigned to command of Coast Artillery districts, the needs of the mobile army are invaded. It would seem to be good policy and in the interests of good organization that the mobile army should not be deprived of any portion of its general officers by such assignments, but that separate provisions should be made therefor by law. It is recommended that legislation be recommended by the Secretary of War that will add to the Coast Artillery Corps brigadier generals of Coast Artillery, to command the Coast Artillery districts.

This matter was carefully considered by the General Staff in its report on the Organization of the Land Forces of the United States, August 10, 1912. Attention is invited to the following quotation from that report:

RELATIONS BETWEEN THE COAST ARTILLERY AND THE MOBILE ARMY.

The land forces of the United States are divided into two distinct parts—the Coast Artillery and the mobile army. The coast fortifications are local in character and are designed to protect important seaports from direct naval attacks and naval raids, to prohibit hostile landings at particular places, to secure our naval bases in the absence of the fleet, to prohibit the use of certain harbors and waters as bases for naval operations against us, to secure safe havens for our vessels, and to release our fleet for offensive operations. The influence of coast fortifications is limited to the areas within the range of their guns, and while they must be recognized as of supreme importance, within the scope of their proper functions, it must not be supposed that they have any power to prevent invasion if we should lose command of the sea. The total length of our coast line is enormous, and the stretches covered by harbor defenses are and must remain very small compared with the unprotected intervals that lie between them. If we should lose the command of the sea, an invader would simply land in one of these intervals. It therefore follows that our ultimate defense depends upon defeating a mobile army of invasion, and this can be done only by having a mobile army prepared to operate in any possible theater of war. The complete defense of our coasts is therefore a problem of cooperation between Coast Artillery and mobile forces.

ESSENTIAL DIFFERENCES AFFECTING THE ADMINISTRATION OF COAST ARTILLERY AND THE MOBILE ARMY IN PEACE AND WAR.

The general relations between the coast fortresses and the mobile troops have already been indicated. Their essential difference lies in the fact that the Coast Artillery is local and will remain local both in peace and in war. The mobile forces, however, will not be confined to a definite territory. They occupy peace stations for purposes of training, but it can never be predicted in what theater of war they may be employed. The coast batteries that cover the entrance to New York Harbor will remain in their present positions in any contingencies, but the mobile forces that may be stationed in the vicinity of New York may be employed at any place within the sphere of national interest.

A correct organization of the two forces should, therefore, be based upon a recognition of these essential differences. The Coast Artillery is territorialized and may properly have a territorial organization in war and peace.

The mobile army, however, must be free to move and should not be tied by its peace administration to any particular locality. The present organization of our Army violates this principle. The same brigadier general commands mobile troops and immobile troops under a system of administration which must necessarily break down in war.

The organization of the Department of the Gulf is a typical example of this illogical arrangement. This department comprises 1 regiment of Infantry, 1 regiment of Cavalry, and 27 companies of Coast Artillery. The organization seems to be based on some idea of convenience for peace administration, but is not designed to meet any military contingency. It is unsound, because the command itself is an illogical command, it being impossible to conceive any military situation which would properly place those units under a single commander in war. It is also unsound, because it must be immediately disrupted in war and the whole machinery of administration broken up at the very time when definite organization is of supreme importance. It would therefore seem that a correct organization of our land forces should provide homogeneous commands for our brigadier generals in time of peace. This can be accomplished by grouping the present Coast Artillery districts into three Coast Artillery Inspections¹ and by giving a definite brigade and division organization to the mobile troops. Under this arrangement the eastern territorial region will comprise two Coast Artillery Inspections and the nucleus of the first division of the mobile army, with certain extradivisional auxiliaries. The central territorial region will comprise the nucleus of the second division of the mobile army, with two or more Cavalry brigades and other extradivisional troops. The western territorial region will comprise one Coast Artillery Inspection and the nucleus of the third division of the mobile army.

It is recommended that brigadier generals be assigned to the command of brigades of mobile troops or of Coast Artillery Inspections.

The creation of the Coast Artillery districts by War Department order followed this recommendation of the General Staff, in so far as practicable without legislation, and Army Regulations have been drawn up prescribing the duties of Coast Artillery district commanders, making them analogous in all respects to those of brigade commanders in regard to matters of inspection and the standardization of instruction.

If legislation be enacted to provide general officers to command Coast Artillery districts, the number of brigadier generals authorized by such law should not exceed the proportion of brigadier generals due to the Coast Artillery Corps as a part of the line of the Army, based on the total legally authorized commissioned strength. If a law were to be passed providing for such number of brigadier generals of Coast Artillery, it should also provide that thereafter colonels of Coast Artillery should not be eligible for appointment as brigadier generals of the line of the Army at large. The effect of this would be to give to the Coast Artillery Corps its due proportion of

¹ Called "districts" in existing orders.

brigadier generals and to reserve to the mobile army the vacancies of all brigadier generals to command Infantry, Cavalry, and Field Artillery brigades. Inasmuch as the present number of general officers of the line of the Army was fixed apart from any consideration of the needs of Coast Artillery districts, the appointment of these officers should not work any reduction in the present number of general officers of the line of the Army.

PERSONNEL.

On July 1, 1916, the authorized strength of the Coast Artillery Corps was 801 officers, exclusive of chaplains, and 20,970 enlisted men, exclusive of 15 Coast Artillery bands.

The distribution of the authorized enlisted personnel, exclusive of enlisted specialists and bands, is as follows:

Distribution of Coast Artillery personnel exclusive of bands and enlisted specialists.

Coast Defenses.	First ser-geants.	Sup-ply ser-geants.	Mess ser-geants.	Ser-geants.	Cor-porals.	Cooks.	Me-chan-ics.	Bu-glers.	Pri-vates, first class.	Pri-vates.	Total.	Rated men.
Portland.....	13	13	13	104	156	26	26	26	247	780	1,404	100
Portsmouth.....	1	1	1	8	12	2	2	2	19	77	125	8
Boston.....	13	13	13	103	154	26	26	26	241	774	1,389	100
New Bedford.....	1	1	1	8	12	2	2	2	19	77	125	8
Narragansett Bay	8	8	8	64	96	16	16	16	152	480	864	61
Long Island Sound.....	13	13	13	102	152	26	26	26	235	768	1,374	100
Eastern New York.....	6	6	6	47	70	12	12	12	108	354	633	46
Southern New York.....	9	9	9	72	108	18	18	18	171	540	972	69
Sandy Hook.....	6	6	6	48	72	12	12	12	114	360	648	46
The Delaware....	4	4	4	32	48	8	8	8	76	240	432	30
Baltimore.....	4	4	4	32	48	8	8	8	76	240	432	31
The Potomac....	3	3	3	24	36	6	6	6	57	180	324	23
Chesapeake Bay.	9	9	9	71	106	18	18	18	165	534	957	69
The Cape Fear...	2	2	2	16	24	4	4	4	38	120	216	16
Charleston.....	4	4	4	32	48	8	8	8	76	240	432	31
Savannah.....	4	4	4	32	48	8	8	8	76	240	432	31
Key West.....	1	1	1	8	12	2	2	2	19	77	125	8
Tampa.....	2	2	2	16	24	4	4	4	38	120	216	16
Pensacola.....	4	4	4	32	48	8	8	8	76	240	432	31
Mobile.....	2	2	2	16	24	4	4	4	38	120	216	16
New Orleans.....	2	2	2	16	24	4	4	4	38	120	216	16
Galveston.....	2	2	2	16	24	4	4	4	38	120	216	16
San Diego.....	2	2	2	16	24	4	4	4	38	120	216	16
San Francisco....	17	17	17	135	202	34	34	34	317	1,014	1,821	130
The Columbia....	3	3	3	24	36	6	6	6	57	180	324	23
Puget Sound.....	13	13	13	103	154	26	26	26	241	774	1,389	100
Oahu.....	11	11	11	88	132	22	22	22	209	660	1,188	85
Manila and Subic Bays	16	16	16	126	188	32	32	32	292	948	1,698	123
Cristobal.....	6	6	6	48	72	12	12	12	114	360	648	46
Balboa.....	8	8	8	64	96	16	16	16	152	480	864	61
8 mine planters and 1 cable ship.	.....	.....	.....	9	18	.....	.....	.....	54	54	135	1 18
Total.....	189	189	189	1,512	2,268	378	378	378	3,591	11,391	20,463	1,474

¹ Chief planters.

The above allowances include those who are temporarily absent from their commands.

MINE PLANTER CREWS.

In view of the confidential nature of the mine planting work and of the difficulty which has been experienced from time to time in

getting suitable men to make up the civilian crews of mine planters, and the fact that mine planters constitute a part of the fighting elements of the coast fortifications, it is recommended that legislation be enacted which will provide that the crews of mine planters shall constitute a part of the enlisted force of the Coast Artillery Corps.

INSTRUCTION.

During the year, the instruction of Coast Artillery troops has included the service of coast guns, mortars, mines, and accessories; the service of such field and siege guns as have been assigned to the coast defense commands; infantry instruction, including marches, field exercises, intrenching, camping, and small-arms practice at 200 and 300 yards range; signaling; first aid to the injured; and vocational training. Considering the unavoidable detachment of officers and men from the coast fortifications, referred to in a preceding paragraph, satisfactory progress has been made in all branches of instruction.

VOCATIONAL TRAINING.

Vocational training had its origin in a Coast Artillery Instruction Order issued January 27, 1915. The following quotation is taken from that order:

During the indoor season the artillery instruction period will be one and one-half hours. The remaining two hours of the daily instruction period will be devoted to courses in vocational instruction under the initiative, direction, and control of coast defense commanders. As many separate vocational courses will be inaugurated and conducted as may be possible, utilizing commissioned officers as supervisors of such courses, and the artillery noncommissioned staff officers, enlisted specialists, and rated men as instructors. Attendance upon these courses will be optional with the enlisted men. Among the courses that may be given are those in telephony, care and operation of combustion and steam engines, surveying, wire and radio telegraphy, firing and care of boilers, electric wiring, typewriting, bookkeeping, and stenography. These subjects are to be considered as merely suggestive, and it is not intended to exclude other vocational subjects which may suggest themselves to coast defense commanders. In so far as practicable the installed Coast Artillery matériel may be utilized in connection with this instruction.

Under this order the vocational training was established in all coast defense commands, and, in the continental United States, there were last year 1,919 men of the Coast Artillery Corps who took advantage of the opportunities to take these vocational courses. The numbers taking the various courses were as follows:

Course for electricians.....	268
Course for telephone operators and repair of telephones.....	128
Course for telegraph and radiotelegraph operators.....	257
Course for engineers (gas, oil, and steam).....	393
Course for firemen.....	171
Course in machine-shop work.....	27
Course in clerical work, including bookkeeping and stenography.....	170
Course in drawing, map making, and blue printing.....	11
Course in baking and cooking.....	16
Course in blacksmithing.....	37
Course in painting, plumbing, and bricklaying.....	21
Course for chauffeurs (automobiles and motor boats).....	69
Course for searchlight operators.....	92
Course for carpenters.....	8
Course for volunteer commissions.....	25

Course in plastering-----	1
Course in model making-----	22
Course in printing-----	4
Course in music-----	20
Course in map reading and sketching-----	144
Course in mathematics-----	37
Total-----	1,919

This was about 17% of the total enlisted strength of Coast Artillery organizations in the United States.

New courses are being added, and it is believed that the reports for the present year will indicate a larger number of enlisted men who are taking advantage of vocational training.

TARGET PRACTICE.

During 1915, the percentages of hits in Coast Artillery target practice were as follows:

Yards.	14-inch rifle.			12-inch rifle.			10-inch rifle.			8-inch rifle.			6-inch rifle.		
	Number shots.	Number hits.	Per cent hits.	Number shots.	Number hits.	Per cent hits.	Number shots.	Number hits.	Per cent hits.	Number shots.	Number hits.	Per cent hits.	Number shots.	Number hits.	Per cent hits.
1,000-2,000.....															
2,000-3,000.....													80	30	44
3,000-4,000.....										7	7	100	199	47	25
4,000-5,000.....				5	0	0	7	5	71	14	10	71	46	21	46
5,000-6,000.....				14	11	79	49	27	55	21	9	43	86	20	23
6,000-7,000.....				78	43	58	44	24	55				32	1	3
7,000-8,000.....				60	34	57	61	15	25				36	1	2
8,000-9,000.....	7	3	43	42	16	38	56	15	27	14	0	0			
9,000-10,000.....				28	3	11	63	14	22						
10,000-11,000.....	7	0	0	136	41	30	119	20	17						
11,000-12,000.....				42	10	24	42	6	14						
12,000-13,000.....				7	0	0									
Totals.....	11	3	21	412	158	38	441	126	29	56	26	46	470	120	26

Yards.	5-inch rifle.			4.72-inch rifle.			4-inch rifle.			3-inch rifle.			12-inch mortars.		
	Number shots.	Number hits.	Per cent hits.	Number shots.	Number hits.	Per cent hits.	Number shots.	Number hits.	Per cent hits.	Number shots.	Number hits.	Per cent hits.	Number shots.	Number hits.	Per cent hits.
1,000-2,000.....				40	7	18				160	78	49			
2,000-3,000.....				40	8	20				921	377	41	12	0	0
3,000-4,000.....	20	1	5	80	4	5				1,065	312	29	144	16	11
4,000-5,000.....	9	1	11				80	8	10	80	2	3	231	40	17
5,000-6,000.....	23	2	2										135	29	21
6,000-7,000.....	28	1	4										174	33	19
7,000-8,000.....													173	24	14
8,000-9,000.....													77	10	13
9,000-10,000.....													17	2	12
10,000-11,000.....													18	2	11
11,000-12,000.....													99	10	10
12,000-13,000.....													12	0	0
Totals.....	140	5	4	160	19	12	80	8	10	2,226	769	35	1,092	166	15

NOTE.—Mean corrected range of practice taken as the range.

The target for the 8, 10, 12, and 14 inch guns was a battleship silhouette; for the 5 and 6 inch guns a destroyer silhouette; and for the 3, 4, and 4.72 inch guns a rectangle 10 feet by 24 feet. The target for mortars was the deck of a battleship.

Under the 1916 Coast Artillery Instruction Order the ammunition allowance is divided into two parts. The first part is to be fired under the regulations prescribed in the order. The second part is to be fired under programs submitted by coast defense commanders when approved by district commanders. This plan has resulted in trying out many interesting problems, such as firing at land targets with mortars.

From the records received thus far, it appears that the 1916 percentages of hits will be greater than the 1915 percentages with all calibers.

THE FORT MORGAN TEST.

In March, 1916, the battleships *New York* and *Arkansas* fired upon a modern emplacement built at Fort Morgan, Ala., using 14-inch and 12-inch guns. The objects of the test were as follows:

1. When projectiles charged with high explosive fired from a modern battleship strike a modern emplacement and detonate in its immediate vicinity to determine the effect upon:

- (a) The emplacement itself.
- (b) A modern rifle and its disappearing carriage.
- (c) The ammunition stored in the magazine.
- (d) The personnel manning the emplacement.
- (e) The accessories, including telephones, sights, range finders, and other apparatus.

2. To determine the probability that a modern battleship will make destructive hits at long ranges.

A board of officers, consisting of Commander J. V. Chase, United States Navy; Lieut. Col. E. E. Winslow, Corps of Engineers; Maj. J. H. Rice, Ordnance Department; Lieut. Commander C. C. Bloch, United States Navy; and Capt. W. K. Wilson, Coast Artillery Corps, was appointed to conduct the test. Valuable information bearing on the construction of coast fortifications and the effect of naval guns in attacking coast forts was obtained.

AIRCRAFT.

The signs of the times point clearly to the necessity of considering aeroplanes as part of the normal equipment of coast fortifications. Air reconnoissance work as conducted by aviators is as important in the way of the value of the information given to a coast defense commander, both with respect to a seaward attack or a landward attack, as it is to the commander of a mobile field force in interior land operations.

Apart from this, further experimentation with the Hammond radio torpedo indicates that the torpedo may be controlled in its movements from an aeroplane. This new feature of this torpedo enormously increases its value, and, in doing so, introduces the absolute necessity of supplying aeroplanes to the coast defenses.

It is believed that aeroplanes should be issued to the Coast Artillery Corps for use in connection with the defense of the fortifications by the Signal Corps in the same way as observing instruments are furnished by the Ordnance Department for range finding use. It will then be necessary to instruct a personnel in the special use of aeroplanes involved in Coast Artillery work.

It is therefore recommended that in the estimates which are submitted to Congress for the supply of aeroplanes, the needs of the Coast Artillery Corps be given consideration.

BOARD OF REVIEW PROJECTS.

The recommendations made heretofore with reference to the desirability of having large-caliber mobile guns available for use along the seacoast so mounted as to fire from railroad cars, with a view to meeting the fire of an enemy's warships at points not defended by fixed fortifications, or of such ships covering a landing of an expeditionary force; the subject of providing for the landward defense of our coast fortifications; the utilization of our coast guns in co-operating with the heavy artillery of the mobile army in military operations over land areas within the range of the guns; and the importance of mounting large-caliber coast guns for all-around fire, so that, apart from their primary use seaward, they may be used incidentally landward in destroying trenches, have been taken up definitely by the War Department and are now receiving consideration by the War Department Board of Review.

MATÉRIEL.

Searchlights.—As searchlights suitable for Coast Artillery work can not be purchased in the open market, it is recommended that the estimates to be submitted to Congress next fall include an item for 50 searchlights, but that their installation in permanent positions be deferred.

Fire control communication systems.—The provisional fire control installations in the South Atlantic coast defenses are deteriorating rapidly, due to disintegration of the overhead twisted pairs. It is believed that, if subterranean and submarine cable were available, this could be installed by troop labor, and a satisfactory system installed. It has been recommended that an item of \$250,000 be included in the estimates for the purchase of such cable.

The installation of the 12-inch guns for long range firing will require additional fire control matériel. It has been recommended that the estimates contain an item of \$425,000 to cover this installation at the 17 emplacements to be constructed during the ensuing year.

During the year, exhaustive studies were made in each coast defense command with a view to providing a system of communication whereby the armament now installed could be used on all areas within the field of fire. The supply of the necessary matériel may be considered a war condition. The needs of each coast defense command will be listed and supplied when funds become available, or from the supply in the hands of the Coast Artillery Militia.

REVISION OF COAST DEFENSE PROJECTS.

The War Department Board of Review, appointed by the Secretary of War in February, 1915, to revise the projects of the Taft Board, submitted a report on November 26, 1915, covering what it considered to be the most pressing requirements of the seacoast fortifications of continental United States and its over-sea possessions. The carrying out of the program recommended by the Board of Review will involve an ultimate expenditure for continental United States of \$70,962,407; for the Insular Possessions, \$11,102,150; and for the Panama Canal, \$13,995,000; or a grand total of \$96,059,557.

The projects of the Board of Review will involve:

(a) The emplacement of twenty-six 50-caliber 16-inch guns and sixty 16-inch mortars.

(b) The utilization as howitzers of 36 of the surplus 12-inch guns now on hand by mounting them on barbette carriages of a special design that will permit of the attainment of a range of 30,000 yards.

(c) The initiation of the construction of 16-inch movable howitzers and experimental 14-inch guns on railroad car mounts, for defense against hostile landings in unfortified harbors.

(d) The provision of 3-inch anti-aircraft guns for seacoast fortifications.

(e) The abandonment of certain existing seacoast armament that is deemed to be of insufficient military value to warrant incurring the cost of providing a manning personnel or ammunition therefor.

(f) The retention of the disappearing carriage as the type mount for direct-fire seacoast guns, except in those instances where special conditions may render advisable the installation of the turret or barbette mount; any type of mount for direct-fire guns to be constructed in future to admit of an elevation of approximately 30 degrees and a motion in azimuth as great as the necessities of the site demand to meet an attack over water or land areas.

(g) Increases in the allowance of seacoast ammunition to the following amounts:

1. For guns in continental United States, except guns of 8-inch caliber and upward on inner lines of defense, allowances equal to one-half the accuracy life of the respective calibers; for mortars, except on inner lines of defense, an allowance equal to one-fourth the accuracy life.

2. For armament of 8-inch caliber and upward on inner lines of defense in continental United States, allowances equal to one-half those for outer lines.

3. For guns in the Insular Possessions and on the Canal Zone, allowances equal to the accuracy life of the respective calibers; for mortars, an allowance equal to two-thirds of the accuracy life.

APPROPRIATIONS FOR 1917.

It is gratifying to be able to state that the aggregate of the appropriations carried in the recent Fortification Act is more than four times the mean of the annual appropriations carried in the Fortification Acts of the preceding 10 years. The more important appro-

improvements of artillery matériel and methods, of investigating and reporting on such additional matters as do not require experiment or test as may have been referred to it, and of making ballistic and other computations demanded by our system of firing guns and mortars.

The following subjects are some of the more important of those considered by the board during the year ended June 30, 1916:

1. Ballistics, including the calculation of elevation and range tables for various guns and mortars; a study of the drift discrepancies in mortar range tables; a study of the effect of temperature on droop; a study of the jump for turret mounts; and a study of the zone arrangement for mortar ammunition.

2. Correction devices, involving the calculation of data for constructing curves for guns.

3. The test of various devices for transmitting data.

4. A study of the type emplacements for mortars and guns.

5. The test of various appliances designed for use in fire control and fire direction.

6. The test of cable and other material used in submarine mining.

7. A study of the movable Coast Artillery armament.

8. Test of the Diesel engine.

9. Test of various coincidence range finders.

10. Test of the Beck searchlight.

11. Study of the subject of sights and observation instruments for anti-aircraft guns.

12. Test of devices for signaling by use of searchlights.

TORPEDO DEPOT.

The Torpedo Depot is, under the supervision of the Chief of Coast Artillery, charged with the design, purchase, and supply of all matériel for the submarine mine service of the Coast Artillery Corps.

During the past year this depot has continued its work of improving existing matériel and of designing new matériel to meet special requirements. In this connection a comprehensive and important program of experimental work was carried out by this depot in August and September with the U. S. Mine Planter *General Samuel M. Mills* in the Coast Defenses of Long Island Sound.

E. M. WEAVER,
Major General, Chief of Coast Artillery.

The CHIEF OF STAFF UNITED STATES ARMY.

COAST ARTILLERY SCHOOL.

The instruction conducted at this school enlarges the field of instruction of Coast Artillery officers and educates and trains especially selected enlisted men for the higher grades in the Coast Artillery noncommissioned staff. The curriculum continues to be one of the important features for increasing the efficiency of the Coast Artillery personnel.

Officers' division.—There were graduated last year 39 officers. None failed to qualify. The work in this division was up to the standard and was conducted satisfactorily. Two officers of the Brazilian Navy and one officer of the Brazilian Artillery reported to take the course of instruction at this school. They pursued only a part of the course and left in March, 1915, in compliance with instructions from their Government. One officer of the Chilean Navy is now pursuing the course of instruction. Ten officers of the Coast Artillery Militia pursued the regular course in gunnery during the last year. The following States were represented: California, Connecticut, Maine, Massachusetts, New York, North Carolina, Oregon, Rhode Island, and Washington.

Enlisted men's division.—There are now under instruction 67 enlisted men. Their work has been satisfactory, and this division of the school is especially useful in educating and training specially selected enlisted men for various grades in the Coast Artillery noncommissioned staff. Commencing in January, 1916, a clerical course was added to this division; the graduates of this course to be eligible for appointment as sergeants major, junior grade, Coast Artillery Corps. The subjects pursued in the clerical course are stenography and typewriting; correspondence, to include preparation of official papers, orders, briefing, indexing, and filing; general office training; and office work.

The usefulness of this division is not confined to increasing military efficiency, but it is a seat of vocational training for enlisted men who pursue several courses fitting them for civilian pursuits. A further continuation of vocational training was conducted last year by permitting 41 of the enlisted men of the Coast Defenses of Chesapeake Bay to pursue vocational training in various departments of both divisions of the school.

On account of the increased number of enlisted specialists authorized by the National Defense Act, approved June 3, 1916, this division of the school will be required to train more selected men for the various grades in the Coast Artillery noncommissioned staff. Tentative steps have been taken to increase the number of enlisted students for the various courses, as indicated below:

Artillery course	15
Electrical course	70
Clerical course	15
Radio course	80
	<hr/>
	180

COAST ARTILLERY BOARD.

During the past year the Coast Artillery Board has continued its work of conducting practical experiments and tests looking to the

improvements of artillery matériel and methods, of investigating and reporting on such additional matters as do not require experiment or test as may have been referred to it, and of making ballistic and other computations demanded by our system of firing guns and mortars.

The following subjects are some of the more important of those considered by the board during the year ended June 30, 1916:

1. Ballistics, including the calculation of elevation and range tables for various guns and mortars; a study of the drift discrepancies in mortar range tables; a study of the effect of temperature on droop; a study of the jump for turret mounts; and a study of the zone arrangement for mortar ammunition.

2. Correction devices, involving the calculation of data for constructing curves for guns.

3. The test of various devices for transmitting data.

4. A study of the type emplacements for mortars and guns.

5. The test of various appliances designed for use in fire control and fire direction.

6. The test of cable and other material used in submarine mining.

7. A study of the movable Coast Artillery armament.

8. Test of the Diesel engine.

9. Test of various coincidence range finders.

10. Test of the Beck searchlight.

11. Study of the subject of sights and observation instruments for anti-aircraft guns.

12. Test of devices for signaling by use of searchlights.

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E. M. WEAVER,
Major General, Chief of Coast Artillery.

The CHIEF OF STAFF UNITED STATES ARMY.

REPORT OF THE SUPERINTENDENT MILITARY ACADEMY.

REPORT OF THE SUPERINTENDENT OF THE UNITED STATES MILITARY ACADEMY.

HEADQUARTERS UNITED STATES MILITARY ACADEMY,
West Point, N. Y., June 30, 1916.

From: The Superintendent, United States Military Academy.

To: The Adjutant General of the Army.

Subject: Annual report.

1. Following is the annual report of the superintendent of the United States Military Academy for the fiscal year ending June 30, 1916:

PERSONNEL.

The number of officers and others in prominent positions on duty at the academy is shown in the following list:

Superintendent and staff.....	5
Professors, permanent.....	7
Professors, by detail from the Army.....	4
Professors, associate, detailed.....	2
Professors, assistant, detailed.....	12
Commandant of cadets and tactical officers.....	15
Master of the sword, instructor of military gymnastics and physical culture....	1
Instructors and other officers.....	68
Medical corps.....	4
Dental surgeons.....	2
Medical corps, instructors in military hygiene (Aug. 28-Oct. 10).....	4
Chaplain.....	1
Librarian.....	1
Civilian instructors of languages.....	3
Civilian instructors of fencing and military gymnastics.....	3
Teacher of music.....	1
Organist and choirmaster.....	1
Pay clerk.....	1
Total.....	135

THE CORPS OF CADETS.

Since my last report, July 1, 1915, the status of the corps of cadets has been as shown below:

July 1, 1915:	Members.
First class.....	126
Second class.....	146
Third class.....	174
Fourth class.....	203
Total.....	649
Graduated.....	124
Discharged for deficiency in studies.....	58
Discharged for deficiency in conduct.....	1
Discharged for deficiency in studies and conduct.....	2
Discharged by reason of physical disability.....	3
Resigned.....	14
Absent on sick leave.....	5
Suspended.....	2

1182 REPORT OF THE SUPERINTENDENT MILITARY ACADEMY.

The following shows the number of cadets admitted to the fourth class by certificate or by mental examination as a result of the March and June examinations in 1916:

	Examined mentally.	Submitted certificates. ¹
March examination.....	76	82
June examination.....	36	49
Total admitted.....		243

¹ Satisfactory under G. O. No. 19, W. D., 1915.

For information regarding examination of June 27, see note bottom page 1186.

In the last decade the number of cadets at the academy and unfilled vacancies existing are as shown below:

Year Sept. 1—	Author-ized number of cadets.	Vacant cadet-ships to be filled.	Cadet-ships filled each year.	Cadet-ships un ² filled Sept. 1.
1906.....	522	172	121	51
1907.....	522	216	140	76
1908.....	533	244	127	117
1909.....	533	272	144	129
1910.....	533	267	145	122
1911 ¹	629	319	262	57
1912.....	631	221	147	74
1913.....	640	278	198	80
1914.....	748	302	215	87
1915.....	706	265	186	79
1916.....	1,332	425	322	² 103

¹ Law of 1910 becomes effective. Now effective to 1916.

² Aug. 1.

From the foregoing it will be seen that for the last 10 years there have always been a considerable number of vacant cadetships remaining after entrance examinations are completed for the year, amounting to an average of 32 per cent of the available vacant cadetships.

The law recently passed, May 4, 1916, increased the number of cadetships to 1,332 and provides that the increase in cadets shall be spread over a period of four years, thus admitting one-fourth of the increase each year. In order to accomplish this it will be necessary to open up each year many more cadetships than the number of cadets to be admitted, and I believe it safe that the number of cadetships opened yearly should be based upon the experience of the last 10 years as shown in the above percentage.

For the March and June entrance examinations this year 1,058 candidates were examined. Three Filipino candidates were examined in January, one qualifying for admission. The following table shows the results:

	Examinations.	
	March.	June.
Qualified mentally and physically.....	124	67
Qualified mentally and probation physically.....	36	18
Ex-cadets to be admitted Aug. 28, 1916, subject to physical examination.....	2	.....
Reported late—not permitted to take examination.....	.....	1
Qualified mentally and physically, not admitted because of cribbing.....	.....	1
Qualified mentally, rejected physically.....	17	12
Disqualified mentally, did not report for physical examination.....	5	5
Disqualified mentally, qualified physically.....	124	151
Disqualified mentally, probation physically.....	34	33
Failed to report for examination.....	134	64
Failed to complete examination.....	20	35
Disqualified mentally and physically.....	31	34
Appointment canceled, over age.....	1	1
Qualified mentally and physically, no vacancy.....	40	11
Declined to take mental examination, failed to report for physical examination.....	1	1
Qualified mentally, on probation physically, no vacancy.....	12	.....
Declined to take mental examination, qualified physically.....	1	2
Declined appointment.....	4	.....
Qualified mentally, failed to report for physical examination.....	14	7
Withdrew from mental examination, rejected physically.....	2	.....
Withdrew.....	6	18
Appointment canceled, under age.....	1	.....
Unable to report on account of sickness.....	5	.....
Failed to report, authorized to submit certificate.....	1	.....
Total nominations.....	615	461

There is still a large number of candidates rejected physically, although the showing is better than last year. The principal causes of rejection are the same as they have been for years, and are for the March examinations this year:

Vision.....	28
Heart.....	11
Underweight.....	20
Flat feet.....	8

The physical requirements are none too rigid for those who are expected to meet the strenuous life in field service. If those selecting candidates would insist upon their selections being first examined by an Army surgeon or some surgeon who knows and appreciates the necessity in the service of sound, robust bodies, and good eyes, there would be fewer rejections for these reasons. Many of those rejected physically are absolutely hopeless cases for the military service and should never have been permitted to try to enter West Point.

Attention is also invited to the large number, 134, who after being nominated as candidates failed to even report for examination. Many of these were alternates whose principals had submitted approved certificates, but there still remains a large number who fail to report for no apparent reason except perhaps indifference or fear of failure, thus preventing their districts from being represented at all. This is a condition that Senators and Congressmen can largely obviate by a careful selection of their candidates, either selecting by competitive examinations or securing a youth who can present an acceptable certificate.

In order to secure cadets of perhaps a broader preparation in studies than required by the West Point entrance examinations, and to permit youths, hoping to secure appointments, to pursue a course of study that would not only prepare them to enter West

Point, but to enter a first-class college as well, the following order was issued by the War Department, and is now in force:

GENERAL ORDERS, }
No. 19.

WAR DEPARTMENT,
Washington, April 7, 1915.

1. General Orders, No. 38, War Department, 1914, is rescinded and the following amended paragraphs 64 and 65 of the Regulations for the United States Military Academy are substituted therefor:

64. *Admission by examination.*—On the third Tuesday in March of each year candidates selected for appointment shall appear for mental and physical examination before boards of Army officers to be convened at such places as the War Department may designate. No candidate shall be examined at any other time unless prevented by sickness or other unavoidable cause from attending the above examination. If thus prevented, he shall report at West Point for examination before 12 o'clock noon on the 12th day of June of the same year. The Filipino candidates selected for appointment, unless otherwise notified by the War Department, shall appear for mental and physical examination on the second Tuesday in January of each year before a board of Army officers to be convened at such place in the Philippine Islands as the commanding general of the Philippine Department may designate.

Each candidate must show by examination that he is well versed in algebra, to include quadratic equations and progressions, and in plane geometry, English grammar, composition, and literature, descriptive and physical geography, and general and United States history, as explained in the circular of notification.

65. *Admission by certificate.*—The academic board will consider and may accept in lieu of the regular mental examination:

(1) A properly attested certificate (Form I) that the candidate is a regularly enrolled student in good standing without condition in a university, college, or technical school accredited by the United States Military Academy, provided that the entrance requirements of the course he is pursuing require proficiency in subjects amounting to not less than 14 units of the list given below.

If attendance at college extends over a semester, a full record of academic work at the college, giving subjects taken and grades attained in each, must accompany the certificate; if attendance at college extends over less than a semester and the candidate was admitted to college by certificate, a certificate (Form II) from the preparatory school giving a full record of studies taken and grades attained must accompany the college certificate. If a scrutiny of the certificate submitted shows low grades, the certificate will be rejected.

A certificate indicating enrollment in or admission to an institution at any other time than that specified in the college register for regular admission or enrollment will not be accepted.

(2) A properly attested certificate (Form II) that the candidate has graduated from a preparatory school or public high school accredited by the United States Military Academy, provided that he has in his school work shown proficiency in subjects amounting to not less than 14 units of the list given below.

If a scrutiny of the certificate submitted shows evidence of low grades or of graduation at an irregular date, the certificate will be rejected.

(3) A properly attested certificate (Form III) from the college entrance examination board that the candidate has shown proficiency in the examinations set by the board in subjects amounting to 14 units from the list given below. If a scrutiny of the certificate submitted shows low grades, the certificate will be rejected.

The list of subjects and the corresponding weights in units is as follows:

(a) REQUIRED.

Every certificate must show evidence of proficiency in the following subjects:

	Units.
Mathematics, A1.....	1
Mathematics, A2.....	1
Mathematics, C.....	1
English, A.....	2
English, B.....	1
History, A	} Any two..... 2
History, B	
History, C	
History, D	
	<hr/> 7½

(b) OPTIONAL.

The remaining 6½ units may be supplied from among the following subjects:

	Units.
Mathematics, B.....	½
Mathematics, D.....	½
Mathematics, E.....	½
Mathematics, F.....	½
History, A.....	1
History, B.....	1
History, C.....	1
History, D.....	1
Any not submitted among required subjects.....	1
Latin, 1.....	1
Latin, 2.....	1
Latin, 3.....	2
Latin, 4.....	1
Latin, 5.....	1
Greek, A1.....	½
Greek, A2.....	½
Greek, B.....	1
Greek, C.....	1
Greek, F.....	1
French, A.....	2
French, B.....	1
French, BC.....	2
German, A.....	2
German, B.....	1
German, BC.....	2
Spanish.....	2
Physics.....	1
Chemistry.....	1
Biology.....	1
Botany.....	1
Physiology.....	1
Physical geography.....	1
Drawing.....	1

The definition of unit and of the ground covered by the designated subjects is that of the college entrance examination board. Credits must correspond to the unit values of the respective subjects. Greater credit than indicated will not be allowed; less credit will be understood as evidence that the entire subject has not been completed.

Certificates should be submitted not later than February 15. A certificate received between February 15 and the examination will receive consideration, but in view of the short time left to the academic board to investigate its value, no assurance will be given that such certificate can be acted on in time to exempt the candidate from the mental examination.

Candidates who are informed that their certificates have been accepted must present themselves at the regular time and place, as prescribed in paragraph 64, for physical examination. (22627560—A. G. O.)

By order of the Secretary of War:

H. L. SCOTT,
Brigadier General, Chief of Staff.

Official:

H. P. McCain,
The Adjutant General.

As was to be expected some difficulty has been found in selecting the schools and colleges whose certificates could be accepted for admission mentally, and the assistance of the National Board of Education was asked by the War Department. To that board are due many thanks for their conscientious and intelligent cooperation.

Many difficulties of a perplexing nature arise, especially with certificates that give incomplete and sometimes incorrect information. In many cases the showing is so poor or defective that those certifying

to them should have refused to forward them because of this insufficient showing for entrance.

Blank certificates have been prepared in accordance with this order and with such detailed instructions therewith that schools and colleges, as well as candidates, can readily see just what is required.

The admission of candidates by certificates made no appreciable change this year in the percentage of vacancies filled under entrance requirements. Eighty-five candidates are to enter July 10 as a result of the examination held June 6 leaving approximately 182 unfilled cadetships.¹ I believe that the most certain and satisfactory way of filling vacant cadetships is by competitive examination for each, and I also believe that this method will give a much better mental average of material for cadets and for officers in the Army. In this connection I quote the following from my reports of 1913, 1914, and 1915:

These cadetships belong to the people of the district, State, Territory, etc., and should be open competitively to all the youths eligible to compete, and it is my recommendation that a law be enacted requiring competitive examinations to be held for each vacancy, that youth to be appointed who passes successfully the best mental examination, and who is physically and morally qualified. The examination questions should be prepared by the academic board and a successful passing of the competitive examination should qualify a youth to enter, so that no other mental examination need be required. The details of conducting such examinations should, I think, be left to the Secretary of War. By announcing in the local papers some 10 months or a year in advance that such a competitive examination will be held, stating its scope, it is believed that there will be a large number of eligible youths who will present themselves for examination in each district from which a vacancy is to be filled.

The law of May 4, 1916, with respect to increasing the Corps of Cadets is as follows:

BULLETIN }
No. 14. }

WAR DEPARTMENT,
Washington, May 15, 1916.

I. The following act of Congress is published to the Army for the information and guidance of all concerned:

"AN ACT To provide for an increase in the number of Cadets at the United States Military Academy.

"Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Corps of Cadets at the United States Military Academy shall hereafter consist of two for each congressional district, two from each Territory, four from the District of Columbia, two from natives of Porto Rico, four from each State at large, and eighty from the United States at large, twenty of whom shall be selected from among the honor graduates of educational institutions having officers of the Regular Army detailed as professors of military science and tactics under existing law or any law hereafter enacted for the detail of officers of the Regular Army to such institutions, and which institutions are designated as "honor schools" upon the determination of their relative standing at the last preceding annual inspection regularly made by the War Department. They shall be appointed by the President and shall, with the exception of the eighty appointed from the United States at large, be actual residents of the congressional or Territorial district, or of the District of Columbia, or of the Island of Porto Rico, or of the States, respectively, from which they purport to be appointed: Provided, That so much of the Act of Congress approved March fourth, nineteen hundred and fifteen (Thirty-eighth Statutes at Large, page eleven hundred and twenty-eight), as provides for the admission of a successor to any cadet who shall have finished three years of his course at the Academy be, and the same is hereby, repealed: Provided, further, That the appointment of each member of the present Corps of Cadets is validated and confirmed.

Sec. 2. That the President is hereby authorized to appoint cadets to the United States Military Academy from among enlisted men in number as nearly equal as practicable of the Regular Army and the National Guard between the ages of nineteen and twenty-two years who have served as enlisted men not less than one year,

¹ An additional physical examination for admission on certificate only was held June 27, 1916. Seventy-nine candidates were admitted as a result of this examination, leaving the total number of unfilled vacancies for the year 103.

to be selected under such regulations as the President may prescribe: *Provided*, That the total number so selected shall not exceed one hundred and eighty at any one time.

SEC. 3. That, under such regulations as the President shall prescribe, the increase in the number of cadets provided for by this act shall be divided into four annual increments, which shall be as nearly equal as practicable and be equitably distributed among the sources from which appointments are authorized.

Approved, May 4, 1916.

By order of the Secretary of War:

Official:

H. P. McCain,
The Adjutant General.

H. L. Scott,
Major General, Chief of Staff.

INSPECTION.

The following is an extract from the report of Lieut. Col. A. W. Brewster, Inspector General:

COMMENDATIONS.

* * * * *

BATTALION OF CADETS.

The battalion of cadets was reviewed and inspected in full dress. The review was executed with accuracy and smartness. The inspection which followed immediately developed nothing to criticize. The appearance of the battalion was extremely smart and soldierly.

The battalion drills in close order were fine performances both as to accuracy and alertness. Considering the fact that there were so many new cadets, fourth classmen, in ranks it was remarkable.

Two days spent with the battalion in camp in post and three days in the field presented an opportunity to judge of the performance of duty as well as the bearing and general conduct of the cadets. I was at all times impressed with the serious and thorough manner in which the cadets went about their work and their manly and soldierly conduct.

DETAIL OF OFFICERS AS INSTRUCTORS.

I have for three years urged that the Military Academy be made an exception in the operation of the detached service law and that officers be detailed as instructors for four years regardless of any other detached service they may have had.

This is a matter of most serious importance to the best interests of the academy, and I feel it my duty to again urge that Congress be asked to pass a bill in accord with the above.

Pertinent to this subject I quote the following from my reports of 1914 and 1915:

It requires from one to two years' experience for even the best of the officers selected to become really proficient and efficient instructors. In all departments much of the first year of a detail as instructor is used in instructing the new officers, both in the subjects taught and in the methods of presenting and teaching the subjects. In the department of mathematics where officers are advanced as instructors from the fourth to the third class, a second year has to be largely devoted to such instruction, so unless an officer can remain here for a full period of four years the cadets lose that instruction to which they are entitled.

The effect of the detached service law passed in August, 1912, has been to deprive this academy of a four-year period of instruction from officers detailed here for that purpose. Except those from the Engineer Corps not an instructor at the academy can complete a four-year detail. As a rule officers with nine or less months beyond complete years of availability when they report must be relieved at the end of a complete year's service because it is impracticable to change instructors during the

progress of a course. For instance, an officer available for three years and nine months under the detached service law can stay but three years; if two years and nine months available he can stay but two years, and so on.

It should be borne in mind that the academy is very much limited in its selection of officers as instructors:

First. They must be graduates of the academy, as no others are sufficiently known here to warrant their selection.

Second. They should be graduates who were not cadets with any class at the academy. This cuts out all graduates of less than three years' service as officers.

Third. They should be officers whose standing in the subject they are to teach and whose character and abilities are such as to commend them for such a detail.

Fourth. They should not have been too long away from the academy and out of touch with subjects of education. Officers over eight years away from the academy should not be detailed as instructors unless they have recently served as instructors or are known to have done work that specially fits them for the position.

These requirements, when further curtailed by the detached service law, place nearly all the officers of the Army beyond our reach for a four-year detail. The very officers who would make desirable or even satisfactory instructors are, because of their attainments, selected for other details and so rendered unavailable as instructors.

The result of the detached service law is that we are compelled to ask for officers as instructors who, without this detached service law, would not have been considered for such duty. These officers when detailed have done their very best, and yet the results have not been up to the standard heretofore attained, and an exhaustive amount of work in instructing these instructors that is beyond all reason has been put upon the heads of the academic departments. The ill effect upon discipline of having instructors not naturally well equipped can not even be estimated, and in this lies a most serious and bad effect of the detached service law upon the cadets at the academy. Instructors who graduated low in their classes, and who are not temperamentally constituted to be good instructors, are now necessarily required to instruct the keen cadets standing high in their studies, and who are ready to take every advantage of an instructor's errors or peculiarities. The result is unsatisfactory not only as regards instruction but in its effect upon discipline.

In this same connection, too, I would recommend that officers serving at West Point with the cavalry and artillery detachments be not considered as "detached service" under present laws. I quote the following from my reports of 1914 and 1915 on this subject:

The officers with these two detachments are in the same relation to the troops (except in name) as if they were serving in their own company and arm. They not only perform exactly the same and all kinds of duty of their rank and arm of the service but are instructors of cadets in these very duties on the drill ground, in marches, in camp, and in field maneuvers. I can see no justice in these officers being regarded, as they are, as on detached duty while at the academy. Each of these two detachments has an enlisted strength and equipment to care for, has separate stables, barracks, and a company organization the same and administered the same as companies of a regiment.

In every sense they are performing duty with their own arm of the service.

BUILDINGS AND GROUNDS.

In my report for 1915, page 21, I considered the possibility of the Corps of Cadets being increased to 1,200 or 1,300 cadets and made certain recommendations regarding the location of the most important buildings to meet such an increase. Attention is invited to that part of my report of 1915.

Since that time a law has been enacted by Congress, approved May 4, 1916, see page 1186, increasing the number of cadetships to 1,332. When that law is in full effect, four years from now, I anticipate that it will place about 1,200 cadets at the academy, assuming, of course, that the present methods and standards for entrance are maintained, and I see no good reason to change these except as I have recommended on page 1186 of this report, i. e., to have competitive entrance examinations in each district and State. This increase, although spread over a period of four

years, makes it imperative that the erection of the necessary buildings to meet the increase should be started at the earliest possible date. It will require two years, and perhaps more in some cases, to complete the large buildings after they are started. This coming year's increase can be handled with the present plant, but further material increase in the Corps of Cadets calls for more accommodations and it will be difficult to have the buildings ready in time even if there was authority to start them at once. The question of the location of the important necessary buildings has been a matter of much study and thought by myself, the professors, and other officers at the academy. In November, 1915, a board of officers consisting of Maj. Gen. Hugh L. Scott, Chief of Staff; Maj. Gen. Tasker H. Bliss, Assistant Chief of Staff; Brig. Gen. Enoch H. Crowder, Judge Advocate General, U. S. Army; Brig. Gen. Henry P. McCain, The Adjutant General, U. S. Army, and myself, was convened by the Secretary of War to consider this question of the enlargement of West Point to accommodate 1,200 cadets. For the consideration of this board I submitted the plans resulting from our studies at West Point. Those plans were approved by the board and by the Secretary of War, and when the law increasing the corps to 1,200 became effective, May 4, 1916, it became necessary to revise the estimates for the Military Academy appropriation bill in many particulars, and to add an estimate for the new construction necessary to meet this new law. The approved plan just mentioned was taken as the basis for the new construction asked, being changed only as to cost to meet present-day prices and a few items that were overlooked in the board's report. As thus changed I received the verbal approval of the Secretary of War the day before the Military Academy bill, May 22, was taken up in the hearings of the House Military Committee, and was used by me in those hearings.

The new construction, etc., asked for is shown in the following:

Cadet mess hall.....	\$770, 843
Cadet barracks.....	859, 236
Cadet hospital.....	270, 000
Cadet laundry.....	118, 000
Camp grounds enlarged, additional toilets, baths, drainage, etc.....	41, 000
Alterations academic buildings.....	42, 000
Officers' quarters.....	288, 000
New roads, paving, grading, etc.....	150, 000
Quarry work for walls, foundations, etc.....	140, 000
Heating, lighting, water, and sewers.....	80, 000
Stables for cavalry and artillery.....	85, 000
Enlisted men's barracks.....	80, 000
Fees of architect and consulting engineers.....	100, 000
Miscellaneous expenses, advertising, printing, specifications, office expenses, clerks, etc.....	50, 000

Total..... 3, 074, 079

This enlargement plan should not be confused with the improvement plans approved 1904 and 1916. There still remains much to be constructed under those plans that is necessary and important and that is not included in the enlargement plan now proposed. The improvement plans are not now urged because the enlargement of West Point at once is so imperative and calls for all the construction that can be handled at one time.

PHYSICAL TRAINING AND ATHLETICS.

I quote below the report of Capt. H. J. Koehler, U. S. Army, master of the sword and instructor of military gymnastics and physical culture. Attention is particularly invited to paragraph 3 of this report. It is believed that this physical training given cadets should be more extensively utilized at Army posts. The results have been most satisfactory in this department of instruction:

1. This instruction was carried out according to the provisions laid down in the usual program during the past year, and the results obtained were, considering everything, quite up to the satisfactory standard obtained in preceding years.

2. I feel it incumbent upon myself to again call attention to the change made in the schedule of the fourth class course four years ago, with the urgent request that some means may be devised which will obviate the deleterious effect this change has had upon this course in particular and upon the training of the other three classes in general. Attention is respectfully called to my report for last year in which this matter is discussed in detail. Under the arrangement now in force three-fifths of the time devoted to the fourth class course is now lost to that class during the month of May; a period during which the benefits and progress far exceed those obtained during any other period of this instruction. It is suggested that this matter be brought to the notice of the fourth class committee.

3. Particular stress has been laid upon the preparation of the members of the first class so that they may be qualified to conduct this work in the service intelligently when called upon to do so. Up to the present time this has not been done except in isolated instances; however, where it has it is very gratifying to report that the young graduates have given a very good account of themselves. What those who have been given this opportunity have accomplished others, if given the chance, would have accomplished equally well. It is therefore urged that the attention of the War Department be again called to the fact that a powerful means to the development of the efficiency of the Army in general is being allowed to go to waste for want of control and recognition from the War Department directly.

4. The instruction in the various forms of physical training, gymnastics, fencing, wrestling, boxing, and swimming, coming under my direction, have been decidedly satisfactory and reflects great credit upon the instructors, all of whom have been painstaking in the discharge of their various duties.

5. Competitive athletics have been decidedly successful during the past year, both as regards the number of cadets engaged in them and the successful outcome of games. More should, however, be accomplished by encouraging even greater numbers to participate in the various sports, not for the sake of representing the Academy on any particular team, but for the good the individual gets out of them. If indulgence in athletics is to be confined to a limited few, who are already the superiors of their fellows physically, to the exclusion of those who indulge in them for the sake of physical betterment only, and if winning is to be made the sole and only desideratum, then athletics fail of their object, especially here at the Military Academy where every student is and must continue to be upon precisely the same plane of equality with every other.

6. Every encouragement is therefore given to cadets to indulge in some form of physical activity during their hours of recreation. They are especially encouraged to take up such forms of exercise that they can continue throughout their active careers in the service, such as gymnastics, fencing, tennis, riding, golf, swimming, etc.

7. It is gratifying to report that splendid results have already been obtained in this direction, as is evidenced by the increasing number who engage in these exercises and the decreasing "gallery" about the fields where the academy teams are being developed.

ACADEMIC DEPARTMENTS.

The work in all academic departments has been most satisfactory and successful. The method of spending much of each recitation period in explaining and imparting instruction has been continued with gratifying results. An instructor is available daily as heretofore in each department to help cadets who desire assistance out of recitation hours, and those who avail themselves of this

help undoubtedly improve their class standing, so there is no excuse for a cadet to be found deficient in studies, except by sickness, a lack of ability, or a failure to utilize his time properly.

DEPARTMENT OF TACTICS.

This department, besides having charge of the theoretical and practical instruction of cadets in drills of all arms of the service, has, under the superintendent, supervision of all matters relative to their conduct and discipline, and because of this class relation to the cadet it is, more than any department at the academy, responsible for the formation of their habits, character, and military bearing, and I am pleased to report that the attitude and work of the officers in this department have been most gratifying.

Lieut. Col. M. F. Smith, the commandant of cadets and head of the tactical department, died June 16, 1916. In his death the tactical department, the academy, and the service have suffered a great loss. In spite of his sufferings Col. Smith was always the courteous, considerate, and able officer; as head of this department he maintained and promoted the high standard of honor and discipline in the Corps of Cadets, and did so by such just and fair methods that he had the confidence and love of the corps as well as the respect and admiration of the officers associated with him. He was faithful in all duties and loyal in a pronounced degree to those under whom he served. His report submitted below was written shortly before his death, and is here printed in full:

One hundred and forty-one cadets reported on June 15, 1915, and 42 reported on later dates. Recommendation is again made that the first examination be held sufficiently early that those taking the second may be enabled to report at the usual time just after graduation. This will permit a practical system of instruction for all to be carried out at the same time. Attention has been called to this for a number of years and it is requested that every effort be made to have, hereafter, all report at the same time.

The detail of five cadets of the graduating class over the new cadets gave excellent results. This detail should be continued regularly.

The training during the summer encampment was very satisfactory, but it is believed that much better results would be obtained if the corps were not encamped in the post. It is necessary to be somewhere in the vicinity in order to have the prescribed course in target practice on the target range and the coast artillery instruction at the mortars and 6-inch guns. Both of these are very important and should not be materially cut down. All other instruction could be given to better advantage at some distance from the post where numerous social and other attractions tend to interfere with the work. With the large increase in the corps it will be necessary to enlarge the present camp site prior to the end of the next fiscal year. Before doing this it is recommended that the question be taken up of selecting a site some distance out on the reservation for the encampment and that the encampment be made under service conditions. The details for target practice and coast artillery could be brought in on motor trucks. If some of the timber was thinned out and cut down, the reservation would be ideal for field training. By leaving a fringe of trees along the roads here and there in places, the picturesqueness would not be destroyed. However, the primary consideration should be utility and not beauty of landscape.

Field training took place on Saturdays during the summer, and a practice march was made from August 16 to 21. Cadets of the first class were assigned daily as officers with the field artillery, cavalry, or practical military engineering details, and field problems were worked out each day in marching from one camp to the next. The route of march was the same as the year before: Peekskill, Lake Mohansic, Amawalk Reservoir, Lake Mahopac, Oscawana Lake, and Garrison. It is believed that this march is the most valuable week in the training of a cadet and it is recommended that it be extended this year to at least two weeks. There were no serious breaches of discipline during the march.

1192 REPORT OF THE SUPERINTENDENT MILITARY ACADEMY.

The first class went to Fort Wright from August 22 to 29 to receive coast artillery practice with service charges. The results were very satisfactory.

The record of the first class in target practice last summer was better than ever before. Thirty-two cadets qualified as expert riflemen; 26 as sharpshooters; 57 as marksmen; 5 as first classmen; 1 as second classman; and none unqualified.

It is believed that the instruction in the various arms would be better if more concentrated, and the attempt will be made during the coming year to arrange the schedule of drills to accomplish this.

In view of the large amount of instruction given to equitation, especially to the first class, and the comparatively small amount of time to field artillery, it is recommended that six weeks of the time assigned to the former during the indoor winter work be transferred to the latter.

The hazing investigation, which took place last summer, showed a number of infractions of the regulations during the preceding year. As a result of the investigation it is believed the conditions are much better. While it is seldom if ever that any under classmen are hurt by being hazed, yet the harm done is to the cadet actually doing the hazing, as it develops in him qualities of a bully and gives him entirely erroneous ideas in regard to the proper method of handling those under him.

It is strongly recommended that steps be taken to have the academic course changed so that the entire subject of minor tactics shall be taught theoretically and practically in the department of tactics. It is believed that the present method of having instruction in field service regulations in the first class year in the department of engineering is wrong and that the course should be so arranged that a cadet should have practical and theoretical instruction commencing with the essentials when he enters and the training should continue progressively, so that upon graduation he has a thorough groundwork in minor tactics.

The large increase in the number of cadets that will take place in the next five years will necessitate the greatest attention and endeavor on the part of all officers, and especially those of the department of tactics, to maintain the standard of honor and discipline in the Corps of Cadets.

DEPARTMENT OF CIVIL AND MILITARY ENGINEERING.

The course in this department includes the "Art of War," besides the subjects indicated by its title. Naturally much stress is put upon this part of the course, supplementing textbook instruction by lectures and a visit if the entire class to the Gettysburg battlefield, where this great battle is studied on the field itself.

The course was carried out satisfactorily, all cadets being proficient at the annual and semiannual examinations.

The following report is submitted by the head of this department, Col. G. J. Fiebeger, professor of civil and military engineering:

The course in civil and military engineering began Wednesday, September 1, 1915, with a class membership of 125.

The class was divided into halves, A and B, formed of the odd and even numbers, according to standing in natural and experimental philosophy, and each half was divided into six sections, according to standing. Although all sections used the same textbooks, by means of omissions the subject matter was divided into five courses, graduated to the ability of the students forming the sections. Transfers between sections were made every two weeks.

The course was conducted by oral and written recitations and a written general review and was completed on December 22. Only two cadets received a mark of less than 73 per cent on the written general review and were required to take a written examination. All passed this examination.

The course in military engineering and the art of war was begun on Monday, January 3, 1916, with a class membership of 125, and was completed on June 3.

After a thorough preliminary study, May 1 and 2 were spent at Gettysburg visiting that battlefield.

There were 61 cadets examined in parts of the course in June; all passed these examinations.

During the course lectures, illustrated by lantern slides, were delivered on recent wars and sieges.

Capt. Frederick B. Downing, Corps of Engineers, was the assistant professor.

REPORT OF THE SUPERINTENDENT MILITARY ACADEMY. 1193

The following officers of the Corps of Engineers were the instructors: Capt. James G. Steese, Capt. Daniel I. Sultan, Capt. George R. Goethals, First Lieut. Frederick S. Strong, and First Lieut. Oscar N. Sohlberg.
All of these officers rendered very satisfactory service.

DEPARTMENT OF NATURAL AND EXPERIMENTAL PHILOSOPHY.

The course in this department embraces the subjects of mechanics, sound, light, and astronomy. There is no course at the academy that better develops the reasoning powers of the pupils than this course in natural and experimental philosophy.
Col. W. B. Gordon, professor of philosophy, will retire for age during the coming year. By long and faithful service and his great devotion to his department and the Military Academy, he has held a position that will be difficult to fill, and the academic board will lose from its councils one of its wisest and most influential members.

The following report is submitted by the head of this department:

The class of 1917 began the course in philosophy September 1, 1915, with 142 members.
At the semiannual examination Cadets Sinkler, Keiser, Monsarrat, Chapman, H. H., Helm, Brown, P. H., and Nygaard failed to make the mark necessary to excuse them from the examination in mechanics. All of these cadets successfully passed the examination.

Cadet Monsarrat was found deficient in chemistry and discharged. Byrne, A. B., had previously been granted sick leave, reducing the class to 140 members.
During the second term Cadet Moore, K. M., was granted sick leave, to join the second class August 28, 1916, reducing the class to 139 members. With this number the course was completed.

The entire class made the necessary average to be excused from the final examinations in sound and light and astronomy.
Ten men reached the necessary mark for distinction. This was a percentage of 7.2 per cent of the entire class.

DEPARTMENT OF MATHEMATICS.

Instruction in mathematics is given cadets for the first two years of their course. It embraces solid geometry, advanced algebra, analytical and descriptive geometry, conic sections, trigonometry, surveying, differential and integral calculus, and for upper sections least squares.
In the two classes 358 cadets were under instruction, and of these 40 were found to be deficient at examinations during the year; 4 of those deficient were turned back one year and 36 discharged.
Below is the report of the professor of mathematics, Col. C. P. Echols:

* * * * *

Instruction.—The fourth class course was in all respects the same as that of the previous year, alternating with surveying during the last 66 days of the academic year.
Examinations were held in December and June, with the following results:

	Number in class.	De- ficient.	Turned back.	Dis- charged.
December.....	180	16	.....	16
June.....	159	14	2	12

1194 REPORT OF THE SUPERINTENDENT MILITARY ACADEMY.

The third class course was in all respects the same as that of the previous year, the prescribed course requiring recitations daily from September, 1915, to June, 1916.

Examinations were held in December, March, and June, with the following results:

	Number in class.	Defi- cient.	Turned back.	Dis- charged.
December.....	167	6	.....	6
March.....	162	2	.....	1
June.....	158	4	2	2

Cadet Wang, of China, who was deficient in March, resigned.

Maj. Bell, who has ably served as associate professor for the last four years, finishes his tour of duty at the academy. It is much to be regretted that this occurs just at the time when the duties of supervision are to be greatly increased by the enlargement of the Corps of Cadets.

DEPARTMENT OF CHEMISTRY, MINERALOGY, AND GEOLOGY.

The course in chemistry, mineralogy, and geology includes, besides the subjects indicated by its title, an elementary course in heat and electricity, with some practical work in the operation of electrical instruments and machines. It is regretted that time does not afford an opportunity to have a more extended course in the subject of electricity, the importance of which for all Army officers is increasing so rapidly.

The work in this department has been conducted very satisfactorily. The following report is submitted by the head of this department, Lieut. Col. Wirt Robinson, professor of chemistry:

Changes in personnel.—Capt. P. H. Worcester, Coast Artillery Corps, was assigned to duty as assistant professor of the department on August 24, 1915.

First Lieut. J. L. Dunsworth, Coast Artillery Corps, will be relieved from duty with the department on May 31, 1916; First Lieut. O. A. Dickinson, Infantry, will be relieved on June 14, 1916; Second Lieut. H. M. Hobbs, Fourth Field Artillery, will be relieved on June 24, 1916; and Second Lieut. C. A. Selleck, First Field Artillery, will be relieved on June 8, 1916.

The equipment of the new chemical laboratory has been completed and it is now in readiness to handle the anticipated larger classes.

Unsatisfactory ventilation of the gas closet has been remedied by installing a motor-driven multivane exhauster of ample capacity.

The progress of the routine work of the department has been satisfactory.

DEPARTMENT OF DRAWING.

This department instructs the second and third classes in drawing. Its work with both classes has been satisfactorily conducted. The following report is submitted by the head of the department, Lieut. Col. E. R. Stuart, professor of drawing:

Personnel.—Lieut. Col. E. R. Stuart, U. S. Army, professor of drawing, in charge of the department; First Lieut. T. M. Chase, Coast Artillery Corps, assistant professor; First Lieut. G. F. Patten, Cavalry, instructor; First Lieut. M. Wildrick, Coast Artillery Corps, instructor; Second Lieut. J. P. Aleshire, Cavalry, instructor, relieved April 29, 1916; Second Lieut. G. Hoisington, Infantry, instructor; and Second Lieut. C. P. Dick, Cavalry, instructor, detailed in department August 24, 1915.

But little change has been made in the schedule of work for the third class from the preceding year. A new problem was introduced for the subject of building construction drawing. The work of this class has been satisfactory, and it is believed that the course as now laid out is well adapted to its purpose as a course in general drawing. No cadets were deficient in drawing in the third-class course.

In second-class drawing the schedule of work was changed considerably to give a more logical and better graded development of the work. The second-class course in mechanical drawing was shortened so as to be concluded by February 10. The time thus saved was utilized in extending the course in topographical drawing and sketching.

With the course as now arranged and instruction as now given it is believed that the courses in mechanical drawing and lettering are sufficient to answer the requirements of all officers. With the exception of perhaps 10 per cent of the class it is believed that no cadet who has completed the present course in drawing will ever have any serious difficulty in making or reading any mechanical drawing that he will encounter in his professional studies or work.

DEPARTMENT OF MODERN LANGUAGES.

The courses in this department were successfully carried on during the year. Three classes, first, second, and third, or a total of 437 cadets were instructed for the academic year just ended, and for the coming year 448 cadets will be under instruction by this department. No other department at the academy has so large a number, and yet the appropriation for the conduct of its routine business in the way of office help is less than for other large departments at the academy.

The following is submitted from the report by the head of this department, Col. C. DeW. Willcox, professor of modern languages:

The department has under instruction during the year. First class, Spanish, 125; second class, Spanish, 145, reduced to 139; third class, Spanish, 167, reduced to 159—total at end of year, 423.

One cadet of the first class was conditioned at the semiannual examination, but passed a satisfactory reexamination March 18, 1916.

* * * * *

Upon the suggestion of First Lieut. Geo. M. Russell, cavalry, assistant professor of French, the third class began its study of French under the so-called natural method. The results attained were satisfactory; this plan will be continued in the future.

On account of the war abroad, no request was made to send officers to Europe to study French and Spanish.

The request to send instructors of Spanish to Costa Rica was disapproved because of Mexican conditions and of the pending Army legislation. As soon as conditions become normal again, the department will renew its application to send officers to France and to Spain, and makes bold to express the hope that the War Department will continue its wise policy in this regard.

It is the opinion of the department that German should form an element of the course of languages. It will shortly submit a report on this subject, looking to the introduction of German on September 1, 1917.

Mr. Louis Vauthier was transferred from the department of tactics as civilian instructor of French.

The salary of the clerk should be raised to \$1,200. The department of modern languages has more cadets under instruction by far than any other of the academy. It is the only department that keeps both morning and afternoon hours. The clerk has charge of the library, is required to have some knowledge of French and Spanish, make out all papers, besides stenographic and typewriting work. His pay is not commensurate with his duties.

The messenger of this department should receive extra duty pay at the rate of 50 cents per diem. I renew my recommendation to this effect.

I also urgently renew my recommendation, made at various times, that foreign instructors of the department should receive heat and light allowance of a second lieutenant.

It is believed that a very fair proportion of the cadets under instruction have acquired, to a certain degree, the ability to converse in French and Spanish. No cadet would be helpless if required to make his wants known, professional or personal, in either of these languages, and to understand average conversation. All have a working knowledge of the printed language, and most can express themselves after a fashion in writing.

It is a pleasure to report that all the officers of the department have given faithful and efficient service during the year.

DEPARTMENT OF LAW.

Instruction is given in this department on alternate days to members of the first class. The course includes elements of common law, constitutional law, international law, and military law. With the brief time available for this course only a foundation in legal education can be acquired, but it is thought that with diligence on the part of the graduates they will be able to handle intelligently the ordinary legal questions they are apt to meet in actual service.

The following is the report of the professor of law, Lieut. Col. E. A. Kreger:

The 1915-16 course in law, like that of the preceding academic year, included elementary, constitutional, international, and military law. The prescribed textbooks were supplemented by the use of a pamphlet on the law of contracts, the Manual for Courts-martial, and General Orders, No. 70, War Department, 1914.

The effort made last year to increase throughout the course the element of practical application of legal principles to facts and conditions with which the student will find it necessary to deal after he shall have become a commissioned officer was continued. Near the end of the year a limited amount of time was devoted to acquainting the members of the class with the proper method of consulting, in the solution of practical questions, such law books as are likely to be available for consultation by officers of the line.

For the more advanced sections of the class the periods ordinarily devoted to reviews were materially reduced. During the time thus saved, amounting to approximately four weeks, these advanced sections made a study of a series of leading cases selected with a view to emphasizing the more important legal principles discussed in the prescribed textbooks, and also made a rather thorough study of the rules of land warfare as published by the War Department in 1914. The results were such as to suggest the advisability of pursuing a similar course next year.

The lecture course for the year consisted of one lecture on the law of contracts by Prof. John Wurts, of Yale University; two lectures on criminal law and procedure by Prof. John W. Edgerton, of Yale University; two lectures on the law of evidence by Prof. Ralph W. Gifford, of Columbia University; one lecture on the development of international law by Prof. George G. Wilson, of Harvard University; and a number of lectures by the head of the department.

In conclusion, it is a pleasure to express my appreciation of the loyalty and zeal with which the assistant professor and instructors, Lieuts. Dawson, Slaughter, Cutrer, Torrey, and Lockwood devoted themselves to the work of the department.

DEPARTMENT OF PRACTICAL MILITARY ENGINEERING, MILITARY SIGNALING AND TELEGRAPHY.

Three classes at the academy receive instruction in this department of one kind or another at various periods during the year. Its work is largely practical and is of great value in fixing in cadets' minds the meaning and purpose of their study in related subjects.

Below is the report of the head of this department, Lieut. Col. M. L. Walker, Corps of Engineers, professor of practical military engineering.

During the year the general character of instruction given the cadets has been the same as during the preceding year.

First Class.—During the summer drill period—from July 5 to August 13—one-third of the class attended daily for instruction in reconnaissance and sketching. The following program was carried out on the dates noted:

July 5, 6, 7, position sketch.

July 8, 9, 12, position sketch.

July 13, 14, 15, position sketch.

July 16, 19, 20, preliminary combined position sketch.

July 21, 22, 23, road sketch, dismounted.

July 26, 27, 28, road sketch, mounted.

July 29, 30, August 2, road sketch, mounted.

August 3, 4, 5, combined road sketch, mounted.

August 6, 9, 10, combined position sketch.

The immediate vicinity of the reservation was used for all the above exercises except the ninth. For this last it was necessary to take the cadets to Congers, N. Y., there being no suitable area for such work more conveniently located.

The idea in the work in sketching is to take it up with the first class immediately succeeding their work along this line as second class men in the department of drawing, so that the work progresses continuously. This proves quite a satisfactory arrangement and will be adhered to.

During the practice march of the Corps of Cadets, August 16-21, cadets daily constituted the reconnoissance and sketching detail; road sketches were made and reproduced daily, the work being creditable to the cadets and giving them a fair idea of what would be possible in field operations.

During September and October one-third of the first class attended instruction on all drill days, work being devoted in September to military signaling and during October to improvised bridges, rigging, and use of tackle, and to becoming familiar with the general characteristics and methods of handling the various high explosives used in military demolitions.

From April 3 to May 24, 1916, the first class attended practical military engineering instruction as in the fall, the work covering the laying out and construction of a section of an infantry field work involving the fabrication and use of all varieties of revetting materials, including reinforced concrete. Various obstacles were employed and also the principal types of loop holes installed.

The interest of the cadets was much stimulated this year by the field work being a reproduction in part of a work in the line on the western front in Europe, which had actually been attacked.

A gallery was driven under the parapet and a mine placed and a portion of the work blown up.

Demonstrations were also given of trench mortar firing, mines as obstacles, fougass, and military demolitions.

Third class.—This class attended practical military engineering instruction during the period of the summer encampment, one-third each day, from 8 a. m. to noon.

The work includes visual signaling, knots and lashings, the use of tackle, rowing, construction of bridges with the United States bridge equipage, and the operation of ferries with the regular bridge material and with improvised floats.

As a supplement to their course in surveying while fourth class men, the third class executed a hydrographic survey of the river front of the reservation.

Fourth class.—During the last 66 days of the academic year this department alternates with mathematics.

The first 20 days were devoted to theoretical instruction, including written general review and the written examination of such cadets as did not make proficient on the general review. During the period of theoretical instruction a complete instrumental equipment was kept in each section room, and all cadets were encouraged to familiarize themselves with all instruments by actually handling them. In addition, during release from quarters, instruments were at all times at the disposal of the cadets under the supervision of qualified noncommissioned officers.

During the remaining 13 days cadets attended instruction in surveying from 8 a. m. to noon, being required to do no study outside of these hours.

These 4-hour periods are devoted to a series of exercises carried out in the field by the cadets, under the supervision of the instructors, the cadets rotating in the various duties but each cadet being required to keep the full notes which are each day turned in for inspection by the professor and instructors. The exercises are designed to cover the field of probable duties of army officers and are as follows:

1. Measurement of base line and determination of declination of the needle.
2. Tracing out contours and plotting same.
3. Survey of a polygon by azimuth method.
4. Differential leveling and establishing a bench mark.
5. Simple triangulation.
6. Laying out a simple curve.
7. Plane table survey.
8. Profile leveling.
9. Transit and stadia traverse.
10. Staking out a building.
11. Plane table and stadia traverse.
12. Cross-section leveling.
13. Adjustment and care of instruments.

The above does not indicate the order in which exercises are given, this being decided by the limitation of the instrumental equipment, but the work is so arranged that for each party, usually consisting of five cadets, a map of a small portion of the reservation is completed.

Through the courtesy of the Chief of Engineers, United States Army, a large number of surveying instruments were loaned from the Washington Barracks Depot for the period April 1 to June 10, 1916, and the instruction was much facilitated thereby.

General.—During the year the equipment of this department along all lines has been maintained by expenditure of the annual appropriation of \$2,000.

With the appropriation of \$3,300 referred to in last annual report, a corrugated-iron ponton shed has been erected, the assembling of the building having been done by men of the United States Military Academy detachment of engineers. This gives storage room for a division of reserve ponton equipage with transportation. There is still needed a suitable building to house a division of advance-guard equipage and it is proposed to ask for an appropriation for this purpose in the next annual estimates.

The Signal Corps has promptly supplied all material and apparatus needed for signal instruction.

DEPARTMENT OF ORDNANCE AND GUNNERY.

The course in this department has been conducted very satisfactorily. There have been no material changes in the work covered. Following is the report of the head of the department, Lieut. Col. Tschappat, professor of ordnance and gunnery:

Aside from minor changes in the subject matter made to bring it up to date the course in ordnance and gunnery was the same as for the preceding year. In addition to the theoretical work for each cadet, the course included 24 hours' shopwork in the machine and blacksmith shops during February and March, and 2 hours' practical instruction in handling machine guns.

Visits were made in connection with the course to Sandy Hook Proving Ground on May 3 and to Watervliet Arsenal on May 9.

Ordnance material.—The armament of the post has been kept in good repair during the year. Changes and alterations ordered by the War Department have been incorporated in the field and seacoast artillery at the post.

In addition to the regular allowance of ammunition for small-arms target practice for officers and enlisted men and \$5,000 for such practice for cadets, the regular allowance of field-gun ammunition was furnished for target practice for the field artillery officers stationed at the post and a liberal allowance of field and seacoast ammunition was furnished for target practice for cadets.

Ordnance laboratory.—This group of buildings, comprising the ordnance barracks, machine, carpenter, and blacksmith shops, storehouses, etc., was kept in good repair during the year. Some rearrangement of machines for greater convenience of instruction of cadets was made.

DEPARTMENT OF MILITARY HYGIENE.

The third class has one month's instruction in this department. The work is valuable and practical, and has been very satisfactorily conducted by Lieut. Col. Henry A. Shaw, Medical Corps, and his assistants.

The following is the report of the head of this department:

The course in military hygiene commenced on September 1 and was completed October 6, 1915. Four officers of the Medical Corps were detailed for temporary duty as instructors during the course, Capts. Philip W. Huntington, Joseph F. Siler, Arthur N. Tasker, and Charles W. Haverkamp.

The only important change in the course was the omission of the six lecture periods and the substitution of practical demonstrations of field sanitary appliances, and of first-aid work. Each section was taken into the field and shown the different methods of water sterilization in camp. Latrines of various patterns were dug and the methods of disposal of excreta demonstrated. Kitchen incinerators of various kinds were built to show the methods of the disposal of garbage in camp. The first-aid work was made practical by giving instruction to small groups of cadets in the emergency treatment of wounds, hemorrhages, fractures, and accidents.

The recitations followed the prescribed textbook, Keefer's Military Hygiene, emphasizing particularly personal hygiene, transmissible diseases, and camp sanitation.

DEPARTMENT OF ENGLISH AND HISTORY.

The course in this department has been carried out successfully and satisfactorily.

The following report is submitted by the head of this department, Lieut. Col. L. H. Holt, professor of English and history:

The quota of instructors has been maintained at 10, 5 in each subject, thus allowing a continuance of small sections and careful attention to the individual needs of each cadet.

English.—As in previous years, the emphasis during the fall term has been laid upon the principles of composition and the application of those principles in writing, and the emphasis during the spring term upon several forms of literature. A new anthology of English poetry, prepared especially for this course, was used this spring for the first time.

During the written general review period at the end of the work of the fall term, the men at the top of class in English and history were excused from the reviews and given a short course in argumentation, followed by four debates. Marked improvement in expression and delivery was noticed during the brief time the department was able to devote to the course.

The special course, introduced in 1914 for the first time, was continued this spring. Thirty-three cadets having an average grade above 2.75 were included in the course. The scope of the dramatic reading was the same as in previous years. The readings in class were selected from contemporary and recent poets.

Lieut. R. C. Richardson, jr., who has continued during the year as assistant professor in English, deserves special mention for the loyalty and efficiency with which he has cooperated with me in the work of the department.

History.—The change in entrance requirements for history went into effect this year. The results of the examinations upon the period assigned were much the same in the percentage of failures and successes as the results of previous examinations.

The special course in history was continued this spring along the same general lines of last year, but more time was given to the instructors for preparation of the talks, and written recitations and quizzes were inserted at intervals. It is expected that this special work will be further developed for the men standing at the top of the class.

By lectures, map study, and quizzes the department has attempted to keep the cadets in the class familiar with the chief problems, political and military, which are now being fought out in Europe. Special emphasis has been laid upon those parts of the textbook which describe conditions leading up to the present situation.

Lieut. J. P. Bubb, who succeeded Lieut. Lyon as assistant professor of history upon the latter's relief from duty at the Military Academy, deserves special mention for his loyalty and efficiency in the history course.

Lectures.—As in previous years, the teaching in the department has been supplemented by lectures. Among those who have lectured during the year are President Arthur T. Hadley of Yale University, Prof. H. A. Beers, Prof. A. G. Keller, Prof. E. B. Reed, Prof. J. C. Adams, Prof. G. H. Nettleton, Prof. H. S. Canby, and Dr. F. H. Green.

In conclusion, I wish to acknowledge the loyal zeal and efficiency with which the instructors have cooperated in the work of the department.

CHILDREN'S SCHOOL.

This school has been in charge of Capt. R. G. Alexander, Corps of Engineers, also performing duty with the detachment of engineers, and has been satisfactory in spite of difficulties. As will be seen from the following report, two grades of 37 pupils were forced to use the basement of the cadet chapel for a schoolroom due to a lack of space in the present school building. This is most unsatisfactory in results. The room is poorly lighted by small windows on one side only, has no suitable toilet conveniences, and is on a hill 150 or more feet above the homes of the children attending, and in the wintertime is frequently accessible only to the larger and stronger ones able to

wade through the snow. It is also distant from the school building, and the teacher is unable to have the help of the principal and other teachers. A new school building should be built in keeping with school buildings now built for our State public schools.

Following is the report of the officer in charge of the school:

There was no change from the preceding year in the teaching force nor organization of the school. The latter was as follows (Grade: Eighth and part seventh; part seventh and sixth; fifth; fourth and third; second and first):

Number of pupils in grade:		Number of pupils in grade—Contd.	
Eighth.....	8	Third.....	17
Seventh.....	14	Second.....	21
Sixth.....	19	First.....	25
Fifth.....	26		
Fourth.....	20	Total.....	150

Number of boys registered, 76.
Number of girls registered, 74.
Regents' examinations were held in January and successfully passed by five pupils who at once entered high school in Highland Falls, N. Y.

It is believed that it will not hereafter be necessary to hold regents' examinations in midyear, thus eliminating a source of inconvenience to pupils desiring to enter high school. In the past special efforts have had to be made to advance pupils who were older than the usual age for completing grammar school. All such pupils have now been graduated and the average age of pupils in each grade is what it should be.

The progress of the pupils during the year was satisfactory in all subjects. The Palmer system of penmanship was used with good results. Much practical work in sewing was accomplished by the girls of the higher grades, including the making of models and also full-size dresses and other garments for themselves. The very small girls made considerable progress in the use and handling of the needle and in learning the simple stitches employed in ordinary needle work.

A patriotic entertainment, originally scheduled for Washington's birthday, but postponed on account of bad weather and an epidemic of sickness, was given in Memorial Hall during the latter part of March. Considerable time out of school hours was devoted by pupils and teachers and the results were very praiseworthy.

For lack of room in the main school building, the third and fourth grades, as in the preceding year, attended in the basement of the cadet chapel, and their work was seriously handicapped thereby. The room was not designed for a schoolroom and is only fairly satisfactory for the purpose. More than ever before the isolated and exposed location of the chapel materially cut down attendance in these two grades since the winter was an unusually severe one. The children attending there are small and can not attend during the days of storm or thereafter until paths and roads through the snow can be dug out. The teacher there, in addition to the regular third and fourth grade work, had to instruct in sewing and writing without the assistance of the teachers specially qualified and designated to supervise that work in the other grades, and was at the same time deprived of the immediate support and assistance of the principal of the school.

It is earnestly hoped that the present school building, unsatisfactory in both size and arrangement, may be replaced in the near future by an adequate one, and it is believed that a building of the social center type now being built in many cities, would best fit the peculiar needs of the post. At present, for lack of any room, neither school entertainments nor joint exercises of the several grades can be held, nor is there any common place on the post for enlisted men and their families to meet for recreation and social pleasure.

With regard to salaries it is recommended that when possible the salary of the principal be increased to an amount equal to that received for similar work in neighboring towns. Otherwise it will be impossible to secure and retain a man of satisfactory qualifications and experience.

The appropriation of \$4,120 for the maintenance of the school was expended as follows:

Pay of principal.....	\$1,080
Pay of four grade teachers.....	2,400
Pay of janitor at chapel.....	100
Purchase of books, stationery, and other supplies.....	540
Balance on hand at end of year.....	.....
Total.....	4,120

REPORT OF THE SUPERINTENDENT MILITARY ACADEMY. 1201

HEADQUARTERS OFFICE.

The work of this office has been satisfactorily and efficiently handled by Capt. C. C. Carter, Coast Artillery Corps. His recommendations in the following report are concurred in:

The undersigned has continued since July 1, 1915, as adjutant of the United States Military Academy, secretary of the academic board, and in command of the United States Military Academy band and detachment of field musicians and the noncommissioned staff.

Headquarters force.—The organization of the headquarters force has not changed during the past fiscal year except that one enlisted clerk has been attached to the disciplinary division for the purpose of accurately recording on index cards, cadet records from which information is often requested and which information in the past has been obtained through reference to at least three and often many more documents on file in the headquarters office, usually in different divisions. This work has progressed in a satisfactory manner and will probably be completed in the ensuing fiscal year. About 2,444 of these cards have been completed and filed and rough copies of 819 additional cards have been completed. This list when once finished can be easily kept up to date and will result in a material saving of time in the office in answering requests for information.

An additional man on extra duty has been placed in the binding division, with a view to reducing, if possible, the cost of binding to the library appropriation. The average cost of binding books for the library when done by contract with outside binderies is something over 60 cents per volume, whereas if this work can be done at the Military Academy bindery the cost thereof for material and additional labor will be approximately 20 cents per volume. This experiment has been tried for something over two months and is working out satisfactorily. It is believed that before the end of the next year the bindery will be able to take care of all of the Military Academy binding, including the library, except a few volumes to be specially and elaborately bound. This will result in a saving of hundreds of dollars, which can be used for the purchase of additional books for the academy library.

An increase in the cost of paper has necessitated the strictest economy in the printing division, and in some cases it has been necessary to authorize lighter paper in order to keep within the appropriation.

Formal recommendations with regard to increased pay for members of the office force were made and have been incorporated in the Book of Estimates and the Military Academy appropriation bill for the fiscal year 1917. Since the submission of these estimates the appropriation bill for the support of the Army has had tentatively inserted therein a clause as follows:

“Hereafter headquarters clerks shall be known as Army field clerks and shall receive the same pay and allowances as now allowed by law to pay clerks, Quartermaster Corps, with the exception that Army field clerks at entrance into the service shall receive but \$1,000 per annum for the first year of service: *Provided further*, That Army field clerks duly assigned to and performing the duties of chief clerks shall receive \$250 per annum in addition to the regular pay of their respective grades while performing the duties of chief clerks: *And provided further*, That Army field clerks shall be subject to the Rules and Articles of War: *Provided*, That the clerks and messengers hereby provided for shall be employed and assigned by the Secretary of War to the offices and positions in which they are to serve and in the grades and salaries hereinbefore provided for the regular force of such clerks and messengers.”

It is urgently recommended that every reasonable effort be made to have included under the provisions of this act the clerks on duty at headquarters, United States Military Academy. Until 1910 these clerks were carried as headquarters clerks, but under instructions from the War Department dated June 14, 1910, this office was directed to have the estimates for the pay of these clerks prepared and submitted with the Military Academy appropriation bill, which has been done since that date; but it is understood from an indorsement dated War Department, May 15, 1911, that the transfer of these clerks to the Military Academy bill on July 1, 1911, would not change their civil-service status nor affect their rights or privileges in any way, so far as known to the department. If the provision referred to above becomes a law and does not include the United States Military Academy headquarters clerks and the printing-office force, it can not be reasonably expected that they can be held in their present positions at their present pay. Many of the positions in this office are such that long tenure of office is absolutely essential to efficiency, and it is entirely impractic-

cable to put new employees in most of these positions. For a number of years persistent effort has been made to have the pay of certain of these clerks increased, but these efforts have been unsuccessful. In event the provision referred to above does not become a law the increases asked for in the regular estimates for 1917 should be authorized. With the increase in the Corps of Cadets contemplated under recent legislation, which will ultimately operate to more than double the corps, an increased amount of work will be thrown where possible on all members of the office force and the increases in the personnel of the force will be kept at a minimum. During the ensuing year it is believed that no actual increase will be necessary, but if it is found that the present office force can not keep all work up to date the detail of enlisted men to assist for the remainder of the year will be asked for and provision for additional clerks will be requested for the fiscal year 1918.

The office force both individually and as a body has rendered most efficient and loyal service. Little time has been lost through illness, and leaves of absence authorized by law have been arranged in such ways as would create a minimum interference with office work. The work of all departments of the office has been satisfactorily performed during the past year, and current work has been kept up to date.

United States Military Academy band.—Recommendation is again made that the band be increased by 10 enlisted musicians graded as follows: Three at \$45 each per month, three at \$36 each per month, and four at \$30 each per month.

The band now consists of 1 leader, who is also the teacher of music, 1 band sergeant, who is assistant leader, 12 enlisted musicians at \$45 each per month, 12 at \$36 each per month, and 16 at \$30 each per month. There has been no increase in the personnel of the band for 16 years, at which time the strength of the Corps of Cadets was about 440 cadets; the strength of the corps within another year will be nearly double this number. At reviews, parades, and other formations where the entire corps is present, and which the band attends, the volume of music is not even now sufficient to give satisfactory march music. The number of brass instruments in the band has been increased as far as is commensurate with proper musical balance for a military band. The only practical way now of increasing the volume of this music is by adding additional numbers to the band—brass instruments to predominate in these additions.

The United States Military Academy detachment of field musicians.—The field music consists of 1 sergeant, 1 corporal and 22 privates. The proportion of noncommissioned officers to privates is entirely too small for proper administration and does not admit of advancement in the field music. No hope can be held out to any private that he may within a reasonable length of time become a noncommissioned officer therein. Normally 1 additional sergeant and 2 corporals would be required for this organization, but in view of its peculiar duties it is believed better to add 1 noncommissioned officer, a corporal, and authorize 10 privates, first class, with pay of a private, first class, engineers, and 12 privates instead of 22 privates. With this additional noncommissioned officer proper administration can be carried out and with the first-class privates something in the way of advancement can be held out for deserving members of this detachment. Under the present organization it is impossible to get desirable men with prior service to enlist for the field music and most of the men serve only one enlistment therein.

Beginning with the fiscal year 1918 it will be necessary on account of the increased Corps of Cadets to have the field music increased beyond that requested herein by 6 privates and 1 noncommissioned officer, preferably a sergeant. The organization should then be 2 sergeants, 2 corporals, 12 privates, first class, 16 privates and a further increase will probably be necessary when the corps has reached its ultimate maximum under recently enacted legislation.

The United States Military Academy band and field music are now and have been for many years under the direct command of the adjutant of the Military Academy. Practically all of their military functions are performed with the Corps of Cadets, which is commanded by the commandant of cadets or an officer of the tactical department. The band and field music may, of course, turn out with other units of the command serving as escorts, but in no case is such escort under the immediate command of the superintendent or the adjutant of the academy. The only cases where the band and field music are actually under direction of the adjutant of the Military Academy are when detachments thereof are used for nonmilitary functions, such as dances, receptions, etc. The weekly inspection of the band and field music is always performed by the commandant of cadets or by one of his assistants at the time of the inspection of the Corps of Cadets. All the duties of the field music are immediately under an officer of the tactical department.

In view of the foregoing and for the specific reason that it is believed that it will make for better administration, it is urgently recommended that the command of the band and field music be turned over to the commandant of cadets to be exercised by

an officer of the tactical department, preferably the assistant to the commandant, who has charge of all details with respect to the use of the band and field music and who performs for the Corps of Cadets so far as such arrangements are concerned the duties ordinarily performed by the adjutant of a command.

QUARTERMASTER'S DEPARTMENT.

The work of this department has been efficiently and satisfactorily performed under the charge of Maj. E. J. Timberlake, Quartermaster Corps. The report of the quartermaster quoted below is so complete as to require no comment:

Report of the operations of the Quartermaster Corps, quartermaster and disbursing officer, United States Military Academy, in charge of construction, and treasurer special contingent fund, for the period from July 1, 1915, to June 30, 1916.

Quartermaster Corps.—The general duties of the Quartermaster Corps continued the same as reported for 1915. The addition of one sergeant, forage master, is urgently recommended.

Army Service Detachment.—This detachment has performed its multifarious duties in a generally satisfactory manner. The amount of work is considerably beyond the capacity of the detachment. The estimates for the fiscal year 1917 carry an item increasing the detachment by 27 men, and also largely increasing the number of non-commissioned officers in the detachment. This is necessary to better organize the detachment for the character of the work required and the efficiency of the service rendered.

Civilian employees.—The civil-service rules made applicable to the United States Military Academy do not work to advantage for temporary employees. An effort was made to have them modified, but without success.

Transportation.—The great demand in the work of hauling fuel, forage, freight, grading, road repair, police, etc., has been satisfactorily performed by the transportation at this post during this year. It is almost needless to say that this could not have been done without the five trucks on hand. With work of this kind increasing, two additional freight trucks will soon be required. Upon the delivery of a new auto ambulance to the medical department in the near future the auto ambulance now used by the medical department will be available for passenger transportation, and will fill a long-felt need. The Quartermaster General has furnished a Ford runabout for the use of the attending surgeon.

The past winter was such as to put out of commission for some time all our motor transportation. On December 13, 1915, there was a fall of snow amounting to 30 inches. It was two or three weeks after before the motor transportation could be operated. Several times during the winter the snow was such as to necessitate other than motor transportation, showing the need of retaining enough horse-drawn transportation to meet such emergencies.

Post cemetery.—The number of interments in the cemetery during the fiscal year was 28, making a total to date of 1605.

The care and maintenance is provided for in the Military Academy appropriations. The present appropriation, \$1,500, is not sufficient to maintain it in a suitable manner. The increase in the number of interments and the increase in space occupied requires increase in the work. It is recommended that an appropriation of \$2,000 be asked in the 1917 estimates. In some previous years this amount has been appropriated, and it is again very necessary.

Fire department.—The Military Academy appropriation act, 1916, carried an item for the purchase of an automobile fire engine. This engine has been delivered and submitted to tests, which it passed with great efficiency. It was sent to a fire in Highland Falls on the night of March 5, 1916, and did valuable work. There has been no fire on the post during the past year.

All buildings are now equipped with hand chemical fire extinguishers. A fire apparatus house centrally located is badly needed. The present one is not adequate, and its situation is the worst possible. It is recommended that the next estimates carry an item for a new building built on modern plans with hose-drying tower, etc.

Power plant.—During the fiscal year 8,195 tons of buckwheat coal have been purchased at a cost of \$22,946. Contract has been let to install two additional 440 horsepower boilers in accordance with present appropriation act. These two boilers will be equipped with automatic stokers, which will permit the use of a cheaper grade of coal, at the same time giving greater efficiency. The estimates for 1917 carry an item for installing automatic stokers under the present boilers. Other improvements are being made, all to result in greater economy and efficiency.

1204 REPORT OF THE SUPERINTENDENT MILITARY ACADEMY.

Heating and ventilating system.—This system has been improved as funds would permit, and throughout the past winter gave satisfaction. There was not a complaint against it received at this office.

According to records of purchase and condition of coal bunkers at this time as compared with the amount on hand a year ago, there was a reduction in consumption this year over last of 350 tons, which is a saving of \$980 or 4 per cent. Other things being equal, the difference in weather conditions this year over last, should have caused about a 15 per cent increase in consumption, so that it is estimated that the total saving is about 19 per cent, or \$4,796.

Modern up-to-date heating plants have been installed in quarters 33 and 35 at a cost of \$1,197. Quarters 37 and 39 will have similar installations made in fiscal year 1917.

The old steel boilers in engineer barracks were replaced with new cast-iron sectional boilers. Cost, \$503.

Gas plant.—Two of the benches were renewed in August, 1915, at a cost of \$848. Repairs to roof and concrete floor in coal bin were made during the year at a cost of \$370.50.

The revenue derived from gas, coke, and tar is covered into the special contingent fund and applied to the payment of employees at gas works, purchase of gas coal, if the appropriation is not sufficient, and for miscellaneous expenses not otherwise provided for.

Gas has been charged at the rate of 80 cents per 1,000 cubic feet; coke at \$3 per ton, and tar, if available, is sold to the highest bidder.

During the past twelve months 13,594,000 cubic feet of gas, 123,461 bushels of coke, and 19,296 gallons of tar were manufactured; 1.608 tons of coal were used for this purpose.

Special contingent fund.—This fund is derived from rentals, and the sale of gas, electricity, coke, tar, wood, and miscellaneous sources. Expenditures from this fund are made under the direction of the superintendent, under provisions of chapter 212, Revised Statutes, act of Congress approved May 1, 1888.

Hotel.—The need of a new hotel is pressing. An appropriation for this is asked each year, but Congress does not appropriate the funds. The hotel has been operated in a generally satisfactory manner by the lessee. Expenditures on hotel for fiscal year 1916 were \$105.35.

Forestry department.—A woods foreman and four woodsmen have been employed during the year and other laborers hired from time to time as required, all paid from the special contingent fund. The sawmill was run for about two months by a sawyer and laborers paid from the appropriation, "Repairs and improvements." Since July, 1915, 1,592 cords of wood, 125,000 feet b. m. of logs, 450 chestnut fence rails, and 5,130 railroad ties have been cut. Some of this material has been already sold and the balance will be sold during the fiscal year 1917, the proceeds going to the special contingent fund. The output of the sawmill amounted to 93,000 feet b. m.

The following number of trees have been planted in the forest: 15,000 three-year old Norway spruce, 15,000 two-year old Norway spruce, 15,000 three-year old red pine, and 7,500 three-year old white cedar. In addition to these, the shade trees in the main part of the post have been pruned and sprayed, some 10 or 12 dead ones removed, and about 300 new ones planted of different varieties.

Some 15 of the large shade trees around the plain and in front of cadet mess have been given surgical treatment, which will insure their preservation for years to come.

Laundry.—The old laundry building is dangerous. There is a great liability of a catastrophe there at any time. Only recently all laundry work had to be stopped and workmen had to be sent in who worked all night shoring up and strengthening floors that had suddenly settled about 3 inches. A new building should be provided at once.

Public works.—Estimates have been prepared and submitted to carry out the enlargement of the academy made necessary by the great increase authorized for the Corps of Cadets. These estimates were based upon plans submitted by the superintendent to the board of officers appointed by the Secretary of War November 4, 1915.

In the estimates for the fiscal year 1918 it is recommended that they include the quartermaster storehouses and shops. The need of these buildings is urgent, the shops will be especially so, for if the plan for enlargement is approved, the present building used as pipe shop will have to be torn down among the first, and there is no place available for this material and workshop.

General repairs and upkeep.—The necessary repairs and improvements to public buildings and quarters have been made as funds would permit.

The porches to south barracks were rebuilt with concrete floors. Thirty rooms and eight halls in south barracks were refloored with composition flooring. Repairs to plaster, woodwork, and painting were done throughout both barracks.

REPORT OF THE SUPERINTENDENT MILITARY ACADEMY. 1205

The cadet mess was altered so as to seat 770 cadets at one sitting. This is the maximum capacity of the present mess hall.

Two different materials were applied to the walls of headquarters and the bachelor buildings in an effort to waterproof them. So far both materials have proven efficient.

Roads.—With the limited funds available, the roads have been kept in fairly good condition. The main road from academic building to the hotel will have to be resurfaced. This work should begin September 1. Other roads, as the one to cadet chapel and the road out to Washington Valley needs rebuilding and will be done as funds permit.

Receipts and disbursements.—Receipts and disbursements are shown in statements attached marked 1, 2, and 3.

No. 1.—Statement of receipts and expenditures pertaining to the special contingent fund, United States Military Academy, for the fiscal year 1916.

July 1, 1915, balance on hand..... \$868.16
June 30, 1916, by amounts received:

Rents—		
Hotel.....	\$100.00	
Post Office Department.....	200.00	
Stables.....	300.00	
Electric-light plant.....	700.00	
Store and restaurant.....	250.00	
Western Union Telegraph Co.....	60.00	
		1,610.00
Sale of—		
Wood, forestry.....	5,932.01	
Electric current and gas.....	11,449.11	
Coke.....	280.38	
Tar.....	517.70	
Railroad ties.....	697.50	
Miscellaneous receipts.....	1,204.40	
Wharfage dues.....	2,447.90	
		22,529.00

Total to be accounted for..... 25,007.16
June 30, 1916, total expended..... 19,846.54

Balance June 30, 1916..... 5,160.62
Amount expended for the repair of south dock from sum collected for wharfage dues..... 1,665.49

No. 2.—Statement of funds pertaining to the Quartermaster Corps at West Point, N. Y., received, disbursed, and deposited during the fiscal year 1916, from July 1, 1915, to June 30, 1916.

	On hand July 1, 1915.	Received since.	Total to be accounted for.	Disbursed and de- posited.	On hand July 1, 1916.	Total dis- bursed, de- posited, and on hand.
Pay of the Army.....	\$11,049.85	\$370,367.50	\$381,417.35	\$344,883.99	\$36,533.36	\$381,417.35
Pay of the Military Academy.....	39,918.85	755,995.23	795,914.08	730,145.62	65,768.46	795,914.08
Pay of Army deposit fund....	1,891.38	13,305.62	15,200.00	15,200.00		15,200.00
Soldiers' deposits.....		6,309.75	6,309.75	6,309.75		6,309.75
Pay collections.....		8,246.09	8,246.09	8,246.09		8,246.09
Supplies, services, and trans- portation, Quartermaster Corps.....		346,770.45	346,770.45	346,770.45		346,770.45
Subsistence of the Army.....		596.22	596.22	596.22		596.22
Regular supplies.....		2,507.27	2,507.27	2,507.27		2,507.27
Military post exchange.....		237.20	237.20	237.20		237.20
Horses for Cavalry, Artillery, and Engineers.....		150.00	150.00	150.00		150.00
Barracks and quarters.....	397.51	4,067.20	4,464.71	4,464.71		4,464.71
Transportation of Army.....	6,236.16	1,131.07	7,367.23	7,367.23		7,367.23
Roads, walks, wharves, and drainage.....	1.53	2,962.00	2,966.53	2,966.53		2,966.53
Shooting galleries and ranges.....	150.75	332.00	482.75	482.75		482.75
Disposition of remains.....		20.00	20.00	20.00		20.00
Headstones, etc.....		11.50	11.50	11.50		11.50
Income tax.....		121.22	121.22	121.22		121.22
Miscellaneous receipts.....		2,599.68	2,599.68	2,599.68		2,599.68
Total.....	59,652.03	1,515,730.00	1,575,382.03	1,473,080.21	102,301.82	1,575,382.03

1206 REPORT OF THE SUPERINTENDENT MILITARY ACADEMY.

No. 3.—Statement of funds received and disbursed from appropriations for the United States Military Academy at West Point, N. Y., during the fiscal year ending June 30 1916.

	Current and ordi- nary ex- penses.	Miscella- neous items and incidental expenses.	Buildings and grounds.	No year, buildings and grounds.	Total.
DR.					
Balance on hand July 1, 1915:					
Fiscal year 1914-15.....	\$366.45				\$366.45
Fiscal year 1915.....	8,405.94	\$2,657.63	\$2,154.06		13,217.63
Fiscal year 1915-16.....	783.52	3,201.49			3,985.01
No year, buildings and grounds.....				\$7,338.25	7,338.25
Received since July 1, 1915:					
Fiscal year 1916.....	138,470.00	50,872.00	90,211.00		279,553.00
Miscellaneous receipts.....	105.60				105.60
Cash collections.....	12.31	32.00			44.31
Total.....	147,777.37	57,129.57	92,365.06	7,338.25	304,610.25
CR.					
Deposited since July 1, 1915:					
Fiscal year 1914-15.....		126.70			126.70
Fiscal year 1915.....	1,982.23	43.47	1,111.91		3,137.61
Fiscal year 1915-16.....	.02				.02
Fiscal year 1916.....	26.45	80.24			106.69
Disbursements since July 1, 1915:					
Fiscal year 1914-15.....		239.75			239.75
Fiscal year 1915.....	6,429.17	2,614.16	1,042.15		10,085.48
Fiscal year 1915-16.....	783.50	2,897.10			3,680.60
Fiscal year 1916.....	126,695.54	47,893.93	65,655.05		240,244.52
No year, buildings and grounds.....				633.39	633.39
Balance on hand July 1, 1916.....	11,860.46	3,234.22	24,555.95	6,704.86	46,355.49
Total.....	147,777.37	57,129.57	92,365.06	7,338.25	304,610.25

TREASURER UNITED STATES MILITARY ACADEMY AND QUARTERMASTER AND COMMISSARY FOR THE BATTALION OF CADETS.

The duties of the treasurer have been ably conducted by Capt. George H. Estes, Twentieth Infantry. His report given below shows clearly the essential features of the business conducted by this department.

I fully concur with his recommendations with respect to a new cadet laundry.

The following report is submitted by the treasurer:

Statement of business Apr. 30, 1916.

ASSETS.		LIABILITIES.	
Accounts receivable.....	\$4,341.34	Accounts payable.....	\$38,157.82
Cadet store stock.....	66,835.66	Equipment fund.....	224,793.48
Cadet mess stock.....	15,504.32	Interest on equipment fund.....	2,221.81
Cadet laundry stock.....	1,428.61	Dialectic society.....	125.67
Cadet store.....	610.90	Glee club.....	.80
Treasurer's cash.....	189,573.95	Miscellaneous fund.....	7.62
Pay due.....	29,300.00	Y. M. C. A.....	333.37
First class club.....	184.95	Reserve fund, store.....	37,144.80
Howitzer, 1916.....	1,336.87	Reserve fund, mess.....	823.30
Tennis account.....	48.79	Reserve fund, laundry.....	5,556.72
Total.....	309,165.39	Total.....	309,165.39

REPORT OF THE SUPERINTENDENT MILITARY ACADEMY. 1207

TOTAL BUSINESS FOR THE PERIOD FROM JULY 1, 1915, TO APR. 30, 1916.

Receipts.....	\$416, 702. 23
Disbursements.....	351, 675. 75

Under authority of the War Department, the treasurer on July 7, 1915, deposited with the Commercial National Bank, Washington, D. C., the sum of \$100,000 of the equipment fund of the cadets at an annual interest of 3 per cent payable quarterly, the principal being secured by contract with the Commercial National Bank and bonds to the amount of \$111,800 which received the approval of the Secretary of War and which are deposited with the treasurer, United States Military Academy. On April 30 the income derived from this fund, namely, \$2,221.81, was apportioned to each cadet in proportion to his equipment fund balance as shown by the records of the treasurer's office, United States Military Academy. The average amounts received by cadets were as follows:

First class.....	\$6. 73
Second class.....	4. 70
Third class.....	3. 02
Fourth class.....	1. 32

The following was the condition of cadets' personal financial standing on April 30, 1916:

- First class, out of debt average \$605.06 per man.
- Second class, out of debt average \$50.29 per man.
- Third class, out of debt average \$64.02 per man.
- Fourth class, out of debt average \$17.23 per man.

In the case of the first class the credit shown includes the equipment fund.

Attention is again invited to the desirability of strict enforcement of the regulations requiring the sum of \$160 to be deposited with the treasurer of the academy before the candidate is admitted as a cadet. This deposit has not been made in many cases, and unless it is done it simply means that those cadets who are in debt are carried along by loans from other more fortunate ones out of debt. In order that the cadets should be on the same financial basis and that no cadet, due to his larger deposit, should have the advantage of being able to purchase athletic supplies and other luxuries debarred to the cadets in debt, it is recommended that this requirement be strictly enforced as a prerequisite for admission.

Cadet store.—The effect of the European war has been sorely felt in the increase in cost of practically every item of uniform and equipment used by the cadets. By taking advantage of opportunities to place contracts for future deliveries and by buying in odd lots for cash, every effort has been made to keep down the increased cost to a minimum.

During the year improvements were made in the gymnasium belt, dress hat, and raincoat without changing the uniform pattern. A new article of uniform, drill breeches, was made up in the cadet store shop and issued to members of the corps. The cadet store building has recently been provided with exterior fire escapes for the safety of the men and women employed in the shops on the fourth floor.

Cadet laundry.—The demand for a new building is most pressing. It has been necessary to close down on two occasions to shore up floors with beams and posts to prevent serious accident. The building was inspected on May 22, 1916, by Mr. Harry C. Sweeney, engineer inspector, bureau of buildings, New York City, with a view to determining whether it was in a condition to continue its use without endangering the lives of employes. He says:

"In conclusion will state that this building as constructed and equipped could not be erected in the city of New York under existing building laws, as it would be considered weak and of insufficient strength, besides not possessing proper protection in case of fire."

It is doubtful if this building will last another year.

Cadet mess.—The increase in cost of every item of food has increased the cost of board. The average cost per day for the period from July 1, 1915, to April 30, 1916, was 65 cents per day. For the previous fiscal year the cost was 64 cents per day. Every indication points to a still further increase in the cost of food supplies.

In anticipation of the enlargement of the Corps of Cadets the seating accommodations of the mess building have been increased to care for 770 cadets. This is the maximum that can be handled at one sitting with the present building and equipment.

The interior of the building has been repainted during the year and all the frames of the portraits of distinguished officers hanging in the main dining room have been regilded.

Following out the recommendation of the surgeon, all mess employees who handle food supplies in any capacity are, prior to employment, subjected to examination and test by the surgeon for typhoid and venereal infection, and thereafter monthly physical inspections are made by the same official. Sanitary drinking fountains and individual towel racks have been installed in the various wash rooms of employees.

HEALTH AND SANITATION.

The health of officers, cadets, and enlisted men has been excellent. While the percentages of daily sick, admissions to hospital, and days lost are slightly more than last year, there has been nothing connected with the ailments to indicate any lack of the most excellent sanitary conditions.

The report of the surgeon, Lieut. Col. H. A. Shaw, Medical Corps, follows:

Corps of cadets.—The health of the corps has been excellent throughout the year. There were 579 hospital admissions during the year, equivalent to an annual admission rate of 1,000 per thousand, a decrease of 127 per thousand as compared with the preceding year; this is the smallest admission recorded during the past 10 years. The non-effective rate, or the number of cadets constantly in hospital, was 13.82 per thousand, as compared with 19.83 per thousand in 1915; this is the smallest rate during the past 10 years except in 1914 when it was 11.92.

The average number of days' treatment of each case was 5 as compared with 6.4 for the preceding year, 4 days for 1914, and 4.8 for the preceding four years. The following table shows the hospital admission rates and the noneffective rates per thousand for hospital cases for the past 10 years:

TABLE I.

Year.	Mean actual strength of com- mand.	Cases.	Rate per 1,000.	Non- effective, rates per 1,000, hospital.
1906-7.....	440	682	1,550	35.22
1907-8.....	404	641	1,596	32.17
1908-9.....	422	992	2,350	32.77
1909-10.....	417	987	2,366	35.73
1910-11.....	407	780	1,916	28.25
1911-12.....	531	764	1,438	17.70
1912-13.....	515	587	1,139	16.89
1913-14.....	562	612	1,088	11.92
1914-15.....	612	690	1,127	19.83
1915-16.....	579	579	972	13.32

There were no cases of critical illness nor of dangerous injury under treatment during the year. A mild but extremely contagious epidemic of influenza occurred during December and January, lasting about one month and affecting about 16 per cent of the corps; 108 cases were admitted to the hospital for treatment, the average duration of each case being about four days; there were no serious complications. Forty-one cases of contagious catarrhal conjunctivitis were treated in hospital during March and April. None of the cases were at all serious. One case of laryngeal tuberculosis, occurring in a cadet on furlough, was transferred to Fort Bayard, N. Mex. Three cases of malaria appeared during the year—one a new case, the other two being recurrences from previous infections. Three cadets were discharged for physical disability, for valvular disease of the heart; one case followed an attack of articular rheumatism, in line of duty; the other two occurred previous to entrance into the Military Academy.

Of the 579 hospital admissions, general diseases, including 108 influenza, furnished the greatest proportion, 135, or 23.01 per cent; injuries and other affections due to external causes furnished 132, or 22.79 per cent; diseases of the digestive system, 96, or 16.58 per cent; diseases of the respiratory system, 79, or 13.64 per cent; and diseases of the eye and ear, including 41 cases of conjunctivitis, 56, or 9.65 per cent.

REPORT OF THE SUPERINTENDENT MILITARY ACADEMY. 1209

Of the 132 affections due to external causes, the greatest proportion were as usual due to accidents during riding, the next most frequent were due to football, to gymnastic exercises, to badly fitting shoes, to basketball, and to baseball, as follows:

TABLE II.

	1915	1914
Accidents during riding.....	43	49
Injuries due to football.....	25	36
Accidents during gymnastics.....	17	13
Injuries from badly fitting shoes.....	7	11
Injuries due to basketball.....	4	7
Injuries due to baseball.....	7	3
Miscellaneous accidents and injuries.....	29	37
Total.....	132	156

The football season was marked by an unusually small number of accidents, most of them of a trivial nature, no injury being permanent. Twenty-five cases required hospital treatment, entailing an absence of 159 days from duty, as compared with 36 cases and 221 days lost in hospital during the preceding season. The freedom of football players from serious accidents is gratifying and is to be attributed to the fine physical condition of members of the squad when active fall practice is begun, and also to the careful oversight on the part of the medical officer on duty with the squad and of the coaching staff. Accidents are far more likely to occur when a player begins to tire and when the fine edge of mental and physical fitness has begun to turn. If at that point the player is taken out of the game most of the serious accidents of football may be avoided. This is the policy which is followed at the academy and which has given excellent results.

In the last annual report from this office, mention was made of the fact that badly fitting shoes were the cause of much foot trouble, particularly in the fourth class, during summer camp. An effort was made to prevent these troubles in the incoming class by requiring that all new cadets be measured and that shoes of proper size be issued in accordance with the detailed instructions prescribed by the War Department for fitting enlisted men. The practical results of this scheme have been exceedingly satisfactory. Capt. H. C. Coburn, jr., Medical Corps, on duty with the corps during their week's practice march in August, reported as follows:

In closing this report I desire to call especial attention to the exceedingly small number of foot injuries treated on this march. Only eight cadets reported to the hospital during the entire week on account of blisters or corns due to marching and these were all of such trifling nature that no duties were missed. I consider this excellent showing due to the good work done this year in accurately fitting the fourth class with shoes of proper size immediately upon admission to the academy. Last year many cadets reported daily with foot trouble, the bulk being made up of fourth classmen with all forms of injuries due to short shoes. The improvement this year was very noticeable and it is hoped that the good results may be perpetuated by the same careful supervision of footwear as was practiced this summer.

A minimum standard of vision has been fixed by the War Department for graduation at the Military Academy. The vision "shall not be less than 20/100 in one eye and 20/70 in the other, these defects to be entirely correctible by proper glasses." This is in accordance with the recommendation of Maj. S. H. Wadhams, Medical Corps, who was detailed by the War Department to make a special study of visual defects among cadets at the academy.

Enlisted men.—During the past year there were 231 admissions to sick report, equivalent to an admission rate per thousand of 326, the lowest on record in recent years. The noneffective rate was also lower than in 1915, being 7.9 per thousand, as compared with 9.35 for 1915. Both the admission and the noneffective rates are very considerably lower than for the Army at large. The following table shows the number of admissions, the admission rate, and the noneffective rate per thousand among enlisted men for the past six years:

TABLE III.

	1911	1912	1913	1914	1915	1916
Admissions to sick report.....	622	401	415	302	359	231
Rates per thousand.....	825	626	603	468	501	326
Noneffective rates.....	18.87	14.81	15.26	11.25	9.35	7.90
Mean annual strength of command.....	649	648	688	702	716	708

1210 REPORT OF THE SUPERINTENDENT MILITARY ACADEMY.

The number of admissions for transmissible diseases was small—including venereal 28, influenza 25, malaria 3, tuberculosis 3. The 3 cases of malaria reported were recurrent attacks; the 3 cases of tuberculosis were transferred to Fort Bayard, N. Mex., for treatment. No case of pneumonia was reported during the year.

Civilian population.—Health conditions among civilians attached to this command have been very satisfactory. A mild epidemic of mumps occurred during December and January among the children of officers and enlisted men, numbering 42 cases. Nine cases of measles were reported during the year, 3 of chicken pox, and 1 of whooping cough.

Sanitation.—The sanitary condition of the post has been excellent throughout the year. The stringent measures against mosquito and fly breeding heretofore adopted have been successfully carried out. Only eight cases of malaria occurred during the year, of which seven were recurrences of previous infection. Five cases were among the cadets, equivalent to an annual admission rate of 8.6 per thousand, the lowest on record except in 1914; three cases were among enlisted men, an equivalent of 4.2 per thousand.

THE LIBRARY.

The following report submitted by Maj. James E. Runcie, librarian at the Military Academy, is complete in itself and calls for no comment:

The library of the Military Academy consists practically of a few collections of books differing in their nature and purposes.

The first of these may be considered a general library of literature, history, and art such as would be suitable for any educational institution. Our collection of this kind is excellent, but not adequate. It does not furnish facilities for study and research in the various fields of general literature and general history, but with judicious additions, including the best current works of this character, it is believed that it can be made fairly adequate for the purposes of the Military Academy as a special school.

Second, a collection of military works, including works in military history and the development of the art and science of war. This should be always a special feature of the library of the academy and should contain substantially every military work produced in our country, every such work of material importance produced elsewhere, all manuscripts of military memoirs which can be procured, especially those which bear on the history of our own army and more especially during periods of war. These should be supplemented by a collection of military maps and prints. Our collection of this character, while considerable in quantity and excellent in quality, is far from being so complete as it should be to enable officers and military students to utilize it satisfactorily in their professional or literary work. Efforts have been made and will continue to be made to supply the deficiencies existing in the collection and to maintain it up to date by the acquisition of all current publications on the subjects stated.

The third collection is that of public documents, legislative and executive, from the General Government and from the governments of the States. The present collection of such material is extensive and adequate, and it is kept up to date by the addition of all such publications which promise to have any permanent value.

The fourth part of our library consists of special collections on engineering, law, chemistry, mathematics, and other sciences taught in the course prescribed for cadets. Inasmuch as each of the academic departments now possesses a library of its own relating to its special subjects, it is therefore deemed not necessary to add extensively to the accumulations under those heads in the academy library.

In addition to the above there is a large collection of fiction, in quantity believed to be adequate for the needs of the academy for some years to come.

The number of volumes in the library on July 1, 1915, was 95,550. On June 30, 1916, the catalogues show 98,323 volumes, an increase of 2,773 volumes during the year. This is believed to be a satisfactory measure of growth for a library of this character.

Special efforts have been made to increase our collection relating to the history of the armies of the United States, Regular and Volunteer, and also to add to the material covering the history of the Confederate armies of the Civil War. These efforts will be continued, as it is believed that this is an especially desirable feature for a library of this character.

Gifts.—In the course of the year the library has received many valuable and interesting gifts, among the donors of which (to whom the thanks of all graduates of the academy are due) are the following: Col. W. C. Church, library of the United States

Soldiers' Home, Dr. J. C. Rodrigues, Mr. Charles Allen Munn, Mr. Albert A. Hopkins, Mr. Randall Webb, Sir Gilbert Parker, Mrs. John Van Rensselaer Hoff, Miss Caroline H. Garland, Mrs. Rutherford Stuyvesant; Sergt. William Schneider, Mrs. J. Marsden Lawton, Col. Charles Hernandez, Gen. Enoch A. Crowder, Mr. T. R. M. Talcott, Col. H. D. Borup, Maj. Gen. William H. Carter, Brig. Gen. H. G. Gibson, Mrs. C. E. Fox.

Library building.—The building in which the library is sheltered, the oldest of the academic buildings at West Point, is in need of repairs which have not been effected because the request made in the annual estimates for funds for that purpose have not been approved. The appropriation for maintenance and increase of the library is believed not to be available under a proper construction of the law for the repair of the library building. A library is not a building but is a collection of books and other printed or written material. The library building is a public building, its status in that respect being the same as any other public building at the academy. It would seem, therefore, that the repairs to the library building should be provided for out of the general appropriation for the repair of all public buildings at the post. Until this construction of the law is accepted no repairs can be made to the library building except at the cost of curtailing the duty of increasing and maintaining the library itself out of the appropriation for that purpose, which it is believed to be an illegal application of the money available.

Statistics of circulation.—No means are available for keeping a record of the amount or character of the reading done in the reading rooms by cadets and others who use the library. It would not be possible to keep such a record without denying to readers free access to all the books on the shelves, and this, it is believed, would be highly undesirable. A record of books drawn from the library for outside reading is contained in the following table.

An examination of the following table discloses the interesting fact that the first five months of the year 1916 show, when compared with the corresponding months of the preceding year, a decrease of 20 per cent in the number of works of fiction drawn and read by cadets and an increase of 25 per cent in works other than those of fiction drawn and read by others than cadets.

Statistics of library circulation.

Month.	Cadets.				Other than cadets.				Total for month.
	Fiction.		Nonfiction.		Fiction.		Nonfiction.		
	Number of vol-umes.	Per cent.	Number of vol-umes.	Per cent.	Number of vol-umes.	Per cent.	Number of vol-umes.	Per cent.	
1915.									
January.....	666	68	307	32	410	52	382	48	1,765
February.....	547	68	260	32	384	58	279	42	1,470
March.....	591	66	304	34	474	65	248	35	1,617
April.....	451	67	218	33	353	48	386	52	1,402
May.....	400	60	271	40	330	48	368	52	1,369
June.....	179	72	70	28	284	55	227	45	760
July.....	162	73	61	27	300	57	232	43	755
August.....	122	72	48	28	294	54	236	46	700
September.....	218	62	136	38	322	46	378	54	1,054
October.....	376	62	235	38	365	50	369	50	1,345
November.....	357	68	168	32	364	49	390	51	1,279
December.....	489	70	207	30	304	41	440	59	1,440
1916.									
January.....	510	65	272	35	393	44	508	56	1,683
February.....	419	62	254	38	420	50	424	50	1,517
March.....	553	61	350	39	467	46	549	54	1,919
April.....	401	64	286	36	324	45	391	55	1,405
May.....	329	57	247	43	296	51	286	49	1,158

MUSEUM.

The ordnance museum occupies several large rooms in the new headquarter building, and is open for visitors and cadets daily. It contains a most valuable collection of models of guns, seacoast

and field, and of small arms of all ages and kinds; also numerous military relics of value and historical interest, particularly valuable is the collection of flags, many of which are now displayed. The old flags of historical value are being repaired as fast as funds allow. Lieut. Col. W. H. Tschappat, in charge of the museum submits the following report:

During the year the following flags have been repaired:

- (1) British King's colors; captured during the Revolution. The funds for the preservation of this flag were supplied by the Priscilla Chapter, Daughters of the Revolution.
- (2) Anspach-Baireuth (German) color; surrendered at Yorktown during the Revolution. The funds for the preservation of this flag were supplied by the Colonial Chapter, New York City, Daughters of the Revolution.
- (3) National color, Third Regiment of Riflemen, 1814-15.
- (4) National color, First Regiment of Light Artillery, 1808-1815.
- (5) National color, Ninth Regiment of Infantry, 1812-1815.
- (6) National color, Fifteenth Regiment of Infantry, 1812-1815.
- (7) National color, Twenty-second Regiment of Infantry, 1812-1815.
- (8) National color, Second Regiment, United States Infantry, 1841-1847.

In addition to the above, work was begun on May 16 on an Anspach-Baireuth (German) color.

The following is a complete list of flags repaired to date:

- (1) British King's colors, Seventh Royal Fusiliers, captured during the Revolution.
- (2) British King's color, approximately about one quarter of the flag, captured during the Revolution.
- (3) Anspach-Baireuth (German) color; surrendered at Yorktown during the Revolution.
- (4) Anspach-Baireuth (German) color; surrendered at Yorktown during the Revolution.
- (5) National color, First United States Infantry, 1791-92.
- (6) Regimental color, Fourth United States Infantry, 1796-1811.
- (7) Regimental color, Eleventh United States Infantry, 1812-1814.
- (8) National color, First United States Light Artillery, 1808-1815.
- (9) National color, Ninth United States Infantry, 1812-1815.
- (10) National color, Fifteenth United States Infantry, 1812-1815.
- (11) National color, Twenty-second United States Infantry, 1812-1815.
- (12) National color, Third United States Infantry, 1814-15.
- (13) National color, Second United States Infantry, 1841-1847.
- (14) Blue silk guidon; Mexican War period.
- (15) Guidon, First Regiment of Mounted Riflemen, Mexican War.
- (16) Blue silk guidon, Civil War period.
- (17) Headquarters flag, Cavalry Reserve Brigade, First Division, Cavalry Corps, Army of the Potomac; Civil War.
- (18) Five United States Artillery or Cavalry national guidons; Civil War.

The following articles were received at the museum during the year:

- July 8, 1915—Photograph of Indians, Big Foot's Band of Warriors; photograph of Indians, Big Foot's Band at Grass Dance on Cheyenne River, August 9, 1890; Chinese hat, painted Moro cloth; gift of Gen. and Mrs. Samuel S. Sumner, United States Army, retired.
- July 16, 1915—Bamboo-wound wooden cannon from Manila, P. I.; gift of Lieut. Robert C. Cotton, S. C., United States Army.
- August 18, 1915—Colt's revolver from China during the Boxer uprising; gift of First Lieut. S. Davis Boak, D. C., United States Army.
- August 25, 1915—Slocum revolver; gift of Messrs. Wm. H. Estler and James R. Voorhees, Morristown, N. J.
- August 30, 1915—Collection of 14 Moro weapons, shield and provision basket which were collected by Capt. R. Foster Walton, United States Army, retired; gift of Mrs. R. Foster Walton.
- September 9, 1915—Walking stick made of one piece of smokeless powder; gift of Lieut. H. M. Hobbs, A. C., United States Army.
- September 22, 1915—Indian stone war club; gift of Mr. H. S. Parker, Cohasset, Mass.
- September 23, 1915—Collection of five Moro weapons; gift of Mrs. E. H. Morris, New York City.

October 12, 1915—Fragment of flag with one star, of the Civil War flag of the Fifty-fifth Regiment, New York State Militia, and volunteers, transferred from the library.

October 28, 1915—Staff Corps sword with scabbard, worn by Col. Symington, United States Military Academy, 1815, and model of 6-pounder, United States field gun, pattern of 1841, on a wooden carriage, made by Col. Symington, gift of Mrs. John Symington.

December 17, 1915—Collection of 25 Indian curios; gift of Gen. B. J. D. Irwin, United States Army, retired.

December 18, 1915—Collection of 7 Moro curios; gift of Lieut. Wm. W. Edwards, cavalry, United States Army.

January 6, 1916—Four pieces of brown prismatic powder taken from a sealed case in the 6-inch magazine of the battleship *Maine*, having been submerged for over 14 years; gift of Maj. James E. Runcie, United States Army, retired.

January 18, 1916—Dress coat with epaulets on shoulders, two epaulets, sword belt, sword-belt frong, two shoulder bars, two sword-scabbard rings, two spurs, service sword with scabbard, and dress sword with scabbard. These were formerly the property of and worn by Col. Sylvanus Thayer; gift of Mr. Julius Moulton, St. Louis, Mo.

March 20, 1916—Model of outrigger fishing boat from Colombo, Ceylon, and a Porto Rican musical instrument, made from a gourd; gift of Col. John M. Carson, jr., Q. M. C., United States Army.

During the year one double-door, Library Bureau, wall case, size 80 by 80 by 16 inches was installed for the display of Indian curios, and one Library Bureau case with fittings, size 126 by 80 by 20 inches was designed for the display of four German Mercenaries flags that were captured during the Revolutionary War. This case has been ordered.

WATER SUPPLY.

The following report of Lieut. Col. M. L. Walker, Corps of Engineers, in charge of the water supply, is so complete that no comments are necessary:

The water-supply system has given practically no trouble during the past 12 months, and is in excellent condition.

Water has been secured from Queensboro Brook, except the period July 24, 1915, to September 8, 1915, when it was necessary, due to the failure of the Queensboro supply, to draw on Popolopen Creek.

The sanitary conditions on both Queensboro Brook and Popolopen Creek have in the main been satisfactory, but constant inspection is necessary to see that these conditions are maintained.

The water throughout the year has been clear and soft and the filtered water satisfactory from a bacteriological standpoint. Examination of both raw and filtered water is made monthly by the surgeon, and a quarterly laboratory test is made through the courtesy of the New York State Health Department.

Referring to the remarks contained in my last annual report concerning the necessity for a separate water system for fire and power purposes, use in stables, etc., some steps looking to a rearrangement of our water supply will be urgently needed in the immediate future to care for the large increase in the number of cadets authorized by recent legislation.

The Palisades Interstate Park Commission has been authorized by the Secretary of War to construct three artificial lakes in Queensboro Brook for the impounding of its waters. The rights of West Point water supply are amply protected while the filling of these basins is in progress and when they are full it is believed great benefit will result to West Point by enabling the supply to be drawn from Queensboro Brook the entire year. As previously remarked, water drawn from our other sources, Popolopen Creek, is not nearly so good as that from Queensboro.

The consumption of water continues very large, but rarely exceeds 1,000,000 gallons per day, an improvement over preceding years. Effort is continuous to prevent waste, and the condition now appears satisfactory.

Lusk Reservoir was full to overflowing except 135 days during the year.

The maximum recorded daily consumption was 1,285,000 gallons January 9, 1916, and the minimum on September 21, 1915, 919,000 gallons. The average has been 1,054,770 gallons per day. Total for the year 385,991,050 gallons.

Personnel.—No change has taken place in personnel during the past year. My thanks are due to the officers, enlisted men, and civilians connected with the affairs for which I am responsible, who have one and all rendered satisfactory service.

CHAPLAIN.

I regard the duties and influence of a chaplain at West Point as about the most important of any in the military service. There are now about 600 cadets and a population of about 1,000 people on the post to whom he administers. He not only conducts the church services, Sunday schools, young men's clubs, girls' friendship society, and other social improvement organizations, but assists the cadets' Young Men's Christian Association, which has an attendance of from 100 to 200 at its meetings and a membership including nearly the entire Corps of Cadets. His good influence in these and all the other pastoral duties common in all parishes can not be overestimated.

The pay of the chaplain is not at all adequate for this important position at West Point, nor commensurate with the work done or benefit derived, and should be increased from that of a captain, \$2,400, to that of a major, \$3,000.

CHAPEL ORGANIST AND CHOIRMASTER.

The organist and choirmaster is another person who is inadequately paid. For five years my predecessor and myself have urged without success an increase in his pay from \$1,200 a year to the pay and allowances (without the rank) of a second lieutenant. The present incumbent, Mr. Frederick C. Mayer, is a musician and an organist of rare ability, and besides has a temperament and individuality that appeal most strongly and favorably to cadets. It is because of these attainments and qualities that he is able to maintain a voluntary choir of 90 cadets for chapel services and train them in music to a degree that has made this feature a pride and a delight to all who attend the cadet chapel services at West Point. Like the services of our present chaplain, the good and inspiring influences of the present choirmaster and organist can not be overestimated, and the modest increase asked in his pay is by no means a full measure for the benefits received by the cadets and others at West Point.

DETACHMENTS.

The following detachments are maintained at West Point as necessary in connection with the instruction of cadets, maintenance of buildings and grounds, and as clerical and other help about the offices of various departments at the academy:

- The detachment of Engineers.
- The detachment of Field Artillery.
- The detachment of Cavalry.
- The Army service detachment.
- The Quartermaster Corps.

The detachment of Engineers is under charge of the professor of practical military engineering, and the Engineer officers detailed to assist him. It furnishes the personnel for the assistance of these officers in instructing cadets, as well as the labor connected therewith in pontoon bridges, surveying, signaling, telegraphy, etc., all as indicated in the report of the professor of practical military engineering on pages 1196-1198. It also does guard and other military duty.

The following report is submitted by Lieut. Col. M. L. Walker, Corps of Engineers:

This organization is under the command of the professor of practical military engineering. It performs guard duty and some garrison police, assists in all cadet instruction, and itself receives practically the same instruction as is given to other Engineer troops of the Army.

The authorized strength of the detachment is 100 men, and the average strength during the year has been 95.75. Recruits were asked for and received in October, 1915, and March, 1916, to fill all vacancies. This has proved more satisfactory than having men dribble in throughout the year. The recruits supplied have been excellent material, and experience during the year indicates that better results are obtained from green recruits of good quality than from assignment of reenlisted men.

* * * * *

As reported last year, the barracks are inadequate to house the detachment properly, there being space for but 70 men. At this time some 33 men are married, and are either supplied with married quarters or rent quarters for themselves in the neighborhood.

The barracks should be enlarged and modernized.

The gymnasium of the detachment has been ceiled with compo board, the expense being borne by the amusement association of the organization. It has further been repainted throughout and the woodwork finish much improved. The men now have an attractive gymnasium and assembly room.

The club for enlisted men mentioned in last annual report has been successfully maintained by the efforts of the chaplain, assisted by Sergt. Williams of this detachment, the detachment commander cooperating. An attractive meeting place is provided for the enlisted men at the north end of the garrison, and it is believed much good is accomplished thereby.

There has been an unusually large number of desertions (12) from the detachment during the past year. Seven of those men are known to have joined the Canadian troops for service in Europe.

It is believed the discipline and instruction of the detachment for the past year have been satisfactory.

ARMY SERVICE DETACHMENT.

This detachment is under the quartermaster and furnishes laborers, skilled and unskilled, for the upkeep of buildings and grounds, police, and the usual work about a military post. A material change in its organization with an increase of 27 in its personnel has been asked of Congress in the Military Academy bill for 1917. The present organization is not adapted or properly balanced as to noncommissioned officers and privates for the work required of it, and its members are not sufficient for the work that should be done by the detachment, thus necessitating the hire of many civilians for double and treble this pay of men in this detachment doing the same kind of work. It is believed a saving will be made because of this if the detachment is reorganized and increased as asked.

QUARTERMASTER CORPS.

The Quartermaster Corps, in addition to the usual duties performed at other posts, also assists in the instruction of cadets in packing, etc.

The Cavalry and Artillery detachments are each under the command of a line officer detailed for that purpose and who are each assisted by a lieutenant of the line. These detachments have charge of stables and animals and the horse and battery equipments used in cadet as well as in their own instruction; they also furnish men to assist in such instruction and they perform both stable and post guard duty.

The Artillery detachment should be materially increased. It has now about the same number of men as a field battery, but has three times the equipment in guns and some 20 more animals to care for. It not only performs all the duties connected with cadet drills, firings, etc., but is itself drilled and instructed the same as any field battery, and furnishes the personnel for service practice by the Field Artillery officers stationed at West Point.

ORDNANCE DETACHMENT.

The following report is submitted by the commanding officer of this detachment, Lieut. Col. W. H. Tschappat:

The work of this detachment consists principally in receiving and issuing ammunition for target practice; caring for seacoast armament at the post; repairing, altering, and handling target material for cadet target practice; furnishing the enlisted personnel required in the museum; furnishing assistance in instruction of cadets in shopwork, and keeping in good order the grounds and buildings pertaining to the ordnance laboratory. This work has been satisfactorily performed during the year.

IMPROVEMENTS TO ROADS AND GROUNDS.

These improvements refer to the bridle paths and roads connecting the wooded and hilly section of the reservation with the main roads. Following is the report submitted by Col. M. L. Walker, Corps of Engineers, on this subject:

This work was prosecuted during the year in accordance with the original plans designed by Olmstead Bros.

The trail from Fort Putnam to Redoubt No. 4 was completed and surfaced throughout and is a valuable addition to the communications about the reservation.

In the southwest corner of the reservation, vicinity of the Cornwall crossroads, several short connecting trails were completed.

During the coming season it is proposed to work upon the trail circling the crest of Crow Nest, and it is hoped to complete this in the one season.

With the prevalence of automobile traffic on all roads these trails are a real necessity for proper horseback exercise of officers stationed here and a great and increasing use is made of them for this purpose.

THE BOARD OF VISITORS.

For the first time in two years a Board of Visitors from the House Military Committee visited West Point this year on May 31, consisting of the following Members: Hon. Ashton C. Shallenberger, Nebraska; Hon. Michael F. Farley, New York; Hon. Richard Olney, 2d, Massachusetts; Hon. Frank L. Greene, Vermont; Hon. Thomas S. Crago, Pennsylvania.

Ever since the law of March 4, 1909, became effective these visits have been made by committees selected from the military committees of Congress, and because of their other pressing duties their visits invariably have been too brief to obtain a thorough understanding of the conditions and necessities of the academy.

I believe better results would obtain if these committees were composed in part of men prominent in educational work, and that these committees should visit the academy in October or November while the academic duties are in progress, and remain here several days. Another matter in this connection appeals to me as important: Some years ago it was the custom for the Board of Visitors to

make a written report setting forth their views and recommendations as the result of their inspection. If these boards—composed, as I recommend, part from the military committees of Congress and part from men prominent in education—could remain here sufficiently long to become acquainted with the workings and needs of the academy, and would make an independent written report thereon, I am sure it would be of assistance to Congress in making many of the appropriations for the academy, and would also be of value to the academy in its educational work.

ALUMNI.

There were 218 of the alumni who visited the academy this year during graduation week, as compared with 300 last year. Special efforts were made to induce them to come, and it was gratifying to see so many of them with us and to feel the splendid influence of their abiding faith and pride in our alma mater. There were reunion dinners at West Point by the classes of 1865, 1866, 1867, 1875, 1876, 1881, 1886, 1890, 1891, 1901, 1904, 1906, 1909, 1911, and 1916. Two hundred attended the alumni luncheon in the West Point army mess. The class of 1867 is among the most enthusiastic of those who return to their alma mater, and its members have, I believe, agreed to return for a reunion dinner at West Point at every graduation period. In this connection I am gratified to see the increasing interest and attendance at alumni dinners held in New York, San Francisco, Fort Bliss, and Honolulu—this year about March 16, the anniversary of the creation of the Military Academy.

It is my hope that the alumni will return to West Point in increasing numbers from year to year and give cheer and support to those here on duty, mingle their pride with ours and each others' as loyal sons of the Military Academy, and if not at West Point then at the March alumni dinners. There is much that the alumni can do for the academy in the support of its high ideals and best traditions, and they can do this better, whether in the service or out of it, if they will return often to their alma mater, imbibe anew the spirit of West Point, see what has been changed and what retained of the West Point they knew, not only in the buildings and grounds, but in the instruction, drilling, and handling of cadets.

GIFTS.

The beautiful bronze equestrian statue of Gen. Washington referred to in my last report as having been tendered as a gift to the United States Military Academy by a patriotic citizen, a veteran of the Civil War, was formally dedicated with appropriate ceremonies on Friday, May 19, 1916.

Maj. Gen. Thomas H. Barry, United States Army, presented to the Military Academy for installation in the belfry of the Catholic chapel one of the bells that Aguinaldo had sent to Sablan during the insurrection against the authority of the United States. This particular bell is known as "San Pedro."

ACKNOWLEDGMENTS.

The superintendent's advisers and assistants in the conduct of the affairs of the academy are the academic board, the staff, and its assistants. Their advice and help have been efficient and loyal and always given in the spirit of harmony and cooperation for the best interests of the academy.

To them and all others concerned in the administration of the academy all thanks are due for such success as has been attained.

Owing to the expiration of my tour of duty as superintendent of the Military Academy on June 30, this will be the last annual report submitted by me, and I desire here to record my grateful thanks to all those who have served under me for their splendid assistance and loyal service.

One thing I feel it my duty to recommend for early and favorable consideration. The dignity of the position of the superintendent of this academy makes it very important that he should have the rank of a general officer, whatever his rank may be when detailed to this position. I recommend that the law which now gives him the rank of colonel, section 1310, Revised Statutes, be changed to give him the rank of brigadier general.

C. P. TOWNSLEY,
Colonel, Coast Artillery Corps, Superintendent.

**REPORT OF THE CHICKAMAUGA AND CHATTANOOGA
NATIONAL MILITARY PARK COMMISSION.**

REPORT OF CHICKAMAUGA AND CHATTANOOGA NATIONAL MILITARY PARK COMMISSION.

WAR DEPARTMENT,
CHICKAMAUGA AND CHATTANOOGA
NATIONAL MILITARY PARK COMMISSION,
Chattanooga, Tenn., September 6, 1916.

SIR: The commissioners have the honor to submit the following report of the progress of the work under their charge for the fiscal year ended June 30, 1916:

PARK AREA.

No additional land has been acquired since the date of our last report.

ROADS.

Of the 102.14 miles of roads in the park system, 95.34 miles of roadway were improved during the fiscal year at a cost of \$23,254.87. This amount includes the cost of material, the hire of labor and all expenses incident to hauling and spreading 15,761 cubic yards of gravel and crushed stone; 4,509 loads of rock and 5,318 loads of dirt, dumped; 481 culverts and 408,999 linear feet of ditches, cleaned. It also includes \$600.17 for the general repair, reflooring and painting of bridges. The average cost of maintenance was \$243.91 per mile. Owing to the increased travel over the park roads by automobiles, and heavily laden trucks and wagons operating, not only from adjacent towns in the State of Georgia, but from Fort Oglethorpe and the military training camp established on Chickamauga Park during the past summer, the cost of maintenance shows an increase of \$1,011.23 over that of last year. The Government roads in the park and what are known as the approaches are many of them public highways. With the increase of population, the establishment of factories, cotton mills, etc., the park roads are subjected to an ever increasing travel for pleasure and business purposes. Some of the park roads are included as a part of the route followed by the Dixie Highway.

FIELD WORK.

The total amount expended for field work during the year was \$5,628. The following table shows the expenditures upon the several reservations:

Georgia division:

Chickamauga Park	\$4, 474. 33
------------------------	--------------

Tennessee division:

Bragg Reservation	24. 57
De Long Reservation	96. 25
Ohio Reservatian	12. 97
Sherman Reservation	137. 64
Cravens Reservation	343. 05
Seventy-third Pennsylvania monument site	1. 50
Point Park, Lookout Mountain	315. 00
Orchard Knob	222. 69

There are 6,543.49 acres of land embraced in the several reservations of the Chickamauga and Chattanooga National Park. Chickamauga Park contains 5,562.78 acres, about two-thirds of which is in forest. The work of clearing out the underbrush and opening up the woodlands has been continued with good results during the year, making it possible to readily locate the numerous monuments, markers, and tablets in the districts covered by these operations, and at the same time affording a protection to the young timber from forest fire.

MONUMENTS, TABLETS, TOWERS, ETC.

The foundation for the Ohio monument to be erected in the Cravens Reservation, on the eastern slope of Lookout Mountain, was completed at a cost of \$404.73. It is understood that the Ohio commission is making arrangements for the dedication of this monument in October next.

The expenditure for the maintenance of the monuments, tablets, towers, etc., was \$360.68, as shown in the following statement:

Monuments and markers, repairs-----	\$56. 05
Tablets, painting and repairs-----	161. 89
Gun carriages, painting-----	76. 20
Towers, lightning rod and repairs-----	61. 25
Signboards, etc. -----	5. 29

BUILDINGS.

The buildings in the park have for a long time been badly in need of repair. Most of them are mere shacks, taken over when the park was purchased and retained because of some historical interest, or found to be necessary as homes for regular employees. These houses are located in the various sections of the park, in both the Tennessee and Georgia divisions, where the employees occupying them act as a guardian or police force in protecting valuable Government property, suppressing disorderly conduct, and stamping out forest fires. The occupation of these houses by employees has also proved to be of great benefit in retaining and controlling competent labor.

The total expenditure for the repair and maintenance of buildings during the year was \$1,072.59. This amount includes the cost of painting, whitewashing, flooring, roofing, and repairs to chimneys.

In addition to the above expenditure for repair of buildings, \$521.01 was expended for the construction of a crusher shelter, garage, and road-roller house, which were very much needed as a protection for park equipment.

REVOCABLE LICENSES AND LEASES.

During the year the following revocable licenses and leases were granted by the Secretary of War:

Chattanooga Railway & Light Co.: Permission to erect poles and string wires across the Cravens Reservation for purpose of furnishing electricity to property owners. Dated September 11, 1915.

Chattanooga Railway & Light Co.: Permission to erect poles, wires, and cables on Government Dry Valley Road, for purpose of distributing electricity for light and power. Dated January 5, 1916.

Central of Georgia Railway Co.: Permission to cross Government Hooker Road with spur track. Dated March 4, 1916.

Chattanooga Gas & Coal Products Co.: Permission to cross Government Hooker Road with 18-inch sewer pipe. Dated March 31, 1916.

City Water Co. of Chattanooga: Permission to lay 800 feet of 8-inch water pipe on Government Hooker Road. Dated April 21, 1916.

City Water Co. of Chattanooga: Permission to extend 4-inch water pipe through Cravens Reservation, for benefit of property owners. Dated April 26, 1916.

City of Rossville: Permission to lay water mains on Government roads leading through town of Rossville, Ga. Dated May 17, 1916.

Nashville, Chattanooga & St. Louis Railway Co.: Permission to extend three spur tracks across Government Hooker Road. Dated June 26, 1916.

LEASES.

S. W. Divine and Capt. Charles A. Lyerly: Rent of land for agricultural purposes. Dated September 11, 1915; surrendered March 16, 1916

Lewis M. Coleman: Rent of land for agricultural purposes. Dated April 12, 1916.

SOUTHERN MILITARY TRAINING CAMP.

During the months of May and June, 1916, the southern military training camp was held in Chickamauga Park. The territory from which students were drawn for this camp embraced 20 States, and local committees were maintained and funds subscribed by citizens of Chattanooga for the purpose of offering the military authorities every assistance. The camp was under the command of Lieut. Col. Daniel W. Ketcham, Coast Artillery Corps, and 465 students received instructions. The following regular troops participated in the camp: Forty-first, Forty-ninth, One hundred and sixty-sixth, and One hundred and sixty-eighth Companies, Coast Artillery Corps, Troop A, Second Cavalry, one company of Engineers, and a detachment of the Medical and Signal Corps.

Under the act of Congress approved March 3, 1915, making appropriations for the sundry civil expenses of the Government for the fiscal year ended June 30, 1916, and for other purposes, the sum of \$55,260 was appropriated for continuing the establishment of the Chickamauga and Chattanooga National Military Park.

The receipts and expenditures were as follows:

RECEIPTS AND EXPENDITURES FOR THE FISCAL YEAR ENDING JUNE 30, 1916.

RECEIPTS.

Balance July 1, 1915, no-year appropriation.....	\$9,000. 32	
Rent of land in Point Park.....	200. 00	
Rent of land in Chickamauga Park.....	115. 00	
Rent of land in Cravens Reservation.....	6. 00	
		<u>\$9,321. 32</u>

EXPENDITURES.

[From balance of July 1, 1915, no-year appropriation.]

Construction, inclosures and fences.....	\$58. 56	
Maintenance:		
Buildings.....	71. 83	
Roads and walks.....	1. 80	
Equipment, stationery.....	434. 40	
		<u>\$566. 59</u>

1224 CHICKAMAUGA AND CHATTANOOGA NAT. MIL. PARK COMMISSION.

OUTSTANDING OBLIGATIONS.

Unexpended stores on hand:		
Stationery	\$7. 36	
Miscellaneous stores	4. 51	
		\$11. 87
Balance available July 1, 1916, no-year appropriation	8, 742. 86	
		\$9, 321. 32

RECEIPTS.

Balance July 1, 1915, 1914 appropriation	201. 38
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EXPENDITURES.

[From balance of July 1, 1915, 1914 appropriation.]

Maintenance; tools	\$0. 98	
Surplus fund warrant No. 36	200. 40	
		201. 38

RECEIPTS.

Balance July 1, 1915, 1915 appropriation	127. 49
Canceled obligation (city water company revocable license)	31. 88
	159. 37

EXPENDITURES.

[From balance of July 1, 1915, 1915 appropriation.]

Maintenance; office expense	\$0. 22	
Unexpended stores on hand; stationery	. 86	
		1. 08
Unexpended balance, appropriation fiscal year 1915	158. 29	
		159. 37

RECEIPTS.

Appropriation for fiscal year 1916	55, 260. 00
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EXPENDITURES.

Salaries of commissioners	\$9, 900. 00
Salary of assistant secretary	1, 833. 33
Salaries of superintendent and assistants	7, 056. 17
Construction:	
Buildings	521. 01
Field work	472. 09
Inclosures and fences	85. 36
Monuments, tablets, towers, etc	408. 48
Roads and walks	21. 10
Maintenance:	
Buildings	951. 69
Holidays (Labor Day and Thanksgiving Day)	129. 50
Office expense	63. 00
Telegrams	13. 51
Transportation of persons	11. 50
Transportation of things	. 64
Water supply	29. 66
Field work	4, 345. 97
Inclosures and fences	187. 13
Machinery	117. 55
Means of transportation	1, 321. 41
Monuments, tablets, towers, etc	290. 07
Roads and walks	21, 141. 48
Tools	262. 03

CHICKAMAUGA AND CHATTANOOGA NAT. MIL. PARK COMMISSION. 1225

Equipment:	
Furniture	\$0. 60
Means of transportation	2. 75
Tools	185. 90
Machinery	50. 00
Unexpended stores on hand:	
Stationery	225. 48
Miscellaneous stores	253. 86
	<hr/>
	\$49, 881. 27

OUTSTANDING OBLIGATIONS.

Salaries of commissloners	900. 00
Salary of assistant secretary	166. 67
Salaries of superintendent and assistants	660. 00
Construction: Field work	286. 60
Maintenance:	
Building	49. 07
Office expense	1. 10
Telegrams .....	. 90
Field work	523. 34
Inclosures and fences	1. 35
Machinery	14. 53
Means of transportation	38. 99
Monuments, tablets, towers, etc	11. 86
Roads and walks	2, 091. 21
Tools	27. 40
Equipment:	
Tools	2. 50
Machinery	24. 50
Unexpended stores on hand:	
Stationery	11. 04
Miscellaneous stores	567. 67
	<hr/>
	5, 378. 73
	<hr/>
	55, 260. 00

RECAPITULATION.

RECEIPTS.

Balance, July 1, 1915 (no-year appropriation)	\$9, 000. 32
Rent of land in Point Park	200. 00
Rent of land in Chickamaugua Park	115. 00
Rent of land in Cravens reservation	6. 00
Balance, July 1, 1915 (1914 appropriation)	201. 38
Balance, July 1, 1915 (1915 appropriation)	127. 49
Canceled obligation (clty water company)	31. 88
Appropriation for fiscal year 1916	55, 260. 00
	<hr/>
	64, 942. 07

EXPENDITURES.

From no-pear appropriation	\$578. 46
From appropriation, fiscal year 1914	201. 38
From appropriation, fiscal year 1915	1. 08
From appropriation, fiscal year 1916	55, 260. 00
	<hr/>
	\$56, 040. 92
Available balance, July 1, 1916, no-year appropriation	8, 742. 86
Unexpended balance, July 1, 1916, 1915 appropriation	158. 29
	<hr/>
	8, 901. 15
	<hr/>
	64, 942. 07

1226 CHICKAMAUGA AND CHATTANOOGA NAT. MIL. PARK COMMISSION.

STATEMENT OF CONDITION OF THE PARK, JUNE 30, 1916.

Area :

Chickamauga Park	acres	5,562.78
Fort Oglethorpe Reservation	do	810.38
Lookout Mountain—		
Cravens Reservation	acres	85.35
Point Park	do	16.50
		101.85
Missionary Ridge—		
Sherman Reservation	do	50.00
De Long Reservation	do	5.25
Ohio Reservation	do	1.50
Bragg Reservation	do	2.50
		59.25
Orchard Knob Reservation	acres	7.36
Total land purchased	do	6,541.62
Land donated for monument sites	do	1.87
Total area, exclusive of rights of way for road purposes	do	6,543.49
Average cost per acre for land purchased		\$48.15
Miles of finished and improved roadways		102
Bridges:		
Number		20
Cost		\$39,470.73
Number of guns mounted: Union, 129; Confederate, 116; total		245
Number of cast-iron historical tablets		638
Number of cast-iron distance and locality tablets		360
Number of bronze historical tablets		61
Number of Army and corps headquarters shell monuments		14
Number of memorial shell monuments, brigade commanders killed:		
Union, 5; Confederate, 4; total		9
Number of State monuments		232
Number of State markers		431
Number of observation towers: Iron, 70 feet high, 5; stone, 85 feet high, 1; total		6

Appropriations made by Congress, \$2,031,718.75.

All of which is respectfully submitted.

C. H. GROSVENOR,
Chairman of Commission.

The SECRETARY OF WAR.

**REPORT OF THE GETTYSBURG NATIONAL MILITARY
PARK COMMISSION.**

York commission had plans and specifications made for the foundation. All other arrangements had been made. In August, 1915, Col. Beckwith, engineer of the New York commission, came to Gettysburg to superintend the erection of the statue; on August 11 the engineer of this commission staked out the foundation lines, the excavation was made, the foundation built, the pedestal erected, and the statue mounted. The dedication exercises were held October 12, attended by a very large assemblage. New York State and City were well represented.

Col. Stegman, chairman, conducted the proceedings; many speakers took part. A granddaughter of Gen. Webb unveiled the statue, and Battery E, Third United States Field Artillery, present for the occasion, fired the salute. The oration was delivered by Maj. Gen. James W. Latta, of Philadelphia. Gov. Whitman; Gen. H. C. King, of New York; Col. Andrew Cowan, of Kentucky, president of the Society of the Army of the Potomac, and Dr. Miller, of the Philadelphia Brigade, were among the speakers.

While the New York commission was at Gettysburg on June 24 they agreed with the National Park Commission upon sites for four markers to mark the positions of the Seventieth, Seventy-first, Seventy-second, and Seventy-fourth New York Regiments of Infantry of the Excelsior Brigade. These had been delivered 25 years before to the Gettysburg Memorial Association, but were never located. They are now along the west boundary line of the Excelsior Field and were erected under contract with C. W. Ziegler & Co. in July, 1915.

THE PENNSYLVANIA MEMORIAL

As reported in 1915, additional work was needed on this monument. Much has been done this year for its preservation by guarding against the action of water and freezing weather. This has been done at the expense of the State of Pennsylvania, Gen. Henry S. Huidekoper, chairman of the commission, and under the supervision of the Gettysburg National Park Commission.

THE VIRGINIA MEMORIAL

The pedestal was erected in 1912 for the statute and other bronze work. We have no information in regard to the completion of this Memorial.

THE GEN. J. L. CHAMBERLAIN STATUE

A commission was appointed by the governor of Maine to take the necessary steps looking to the erection of a bronze statue to Bvt. Maj. Gen. Joshua L. Chamberlain on Little Round Top. A committee visited the battlefield, viewed certain locations suggested, but no information in the matter has been received.

THE GEN. O. O. HOWARD STATUE

A committee was appointed five years ago to select a site for an equestrian statue to Gen. O. O. Howard—Maj. Gen. Chamberlain, chairman; Brig. Gen. Tilden, and Maj. S. C. Gordon. The report of 1911 states that the committee visited the field June 9, viewing

various locations, to make a report to the governor on the subject upon their return to Maine. Nothing has been received of any future action.

MILITARY AVENUES.

The activity in respect to avenues has been mainly maintenance. Efforts have been made to have a good system of piked avenues constructed on the East Cavalry Battlefield. All the preliminary engineering was done for the purpose, and the commission prepared to begin the construction as soon as authorized by the War Department. Culverts were built in 1915 and the subgrade and grade lines staked. Specifications and blue prints were furnished to contractors, and bids were received for building 2 miles of avenue. The bids were all high and were canceled. In the autumn of 1915 modified bids upon reduced specifications were asked for. A very low bid was made by M. & T. E. Farrell, who have built many avenues on the field. Their bid was reported and authority received on April 27, 1916, to make a contract for the work, which was begun on June 5, 1916.

About 2,000 tons of screenings have been contracted for, which have been delivered in Gettysburg, hauled and spread upon the surface of the avenues and the connecting public roads which have been ceded by the Commonwealth of Pennsylvania to the United States, and graded and piked by the commission. These screenings were furnished, delivered, hauled, and spread by Samuel Robinson at a cost of \$2.08 per ton.

GUTTER PAVING AND REPAIRS.

The gutter paving which was begun last year on Hunt Avenue was continued and completed during the summer and autumn of 1915. In the early spring, as soon as the frost is well out of the ground, workmen go over all the gutter paving, ramming down the line and side stones, before going to work at new paving. The winter of 1915-16 was an open one, with short intervals of frost in the ground, consequently the paving has suffered very little. About 1,500 feet of gutter on Williams Avenue had been paved when work on the field stopped in December, 1915; also 300 feet of paving on Slocum Avenue. After the winter had passed and work was resumed in the spring the pavers went to work on Meade Avenue, where they have completed 300 feet, and also about 2,000 feet on the sides of other avenues on the field where such work had been previously reported to be needed, continuing their work until the close of this report, June 30, 1916.

GUN CARRIAGES.

The total number of mounted guns on the battlefield enumerated in the last report was 404. The following mounted guns have been added to batteries having two guns each:

Two 3-inch rifles to Cushing's Battery A, Fourth United States Artillery.

Two 3-inch rifles to Arnold's battery, Rhode Island Artillery.

Two Napoleons to Randol's Batteries E and G, First United States Artillery.

A total of 410 guns on the field.

Two additional limbers were furnished by Maj. Calvin Gilbert and mounted with those of Cushing's United States Battery.

An additional caisson was furnished and mounted for Cushing's battery.

BRIDGES AND CULVERTS.

A new floor was put in the Reynolds Avenue Bridge, crossing the Western Maryland Railroad, and completed April, 1915. Other repairs to bridges were as follows: All the stone bridges and abutments were pointed, and a new culvert built on section 7, on the road to Sharpshooters Monuments, in the Pitzer Woods.

PAINTING.

The painters have been employed principally upon renewing the coating on gun carriages, iron tablets, avenue pipe fencing, railing along avenues and on bridges, and on United States farm buildings.

CLEANING BRONZE TABLETS.

The lettering on bronze tablets erected by the commission to the armies, corps, divisions, and brigades have been repolished on the battlefield and on the United States Regulars Army Monument.

MOWING.

The season was backward in May, and the mowing parties went to work about the 10th of the month. There was one party with a horse lawn mower and one party with one-horse side-bar mower, assisted by mowers with scythes and hand lawn mowers for work on the banks and around monuments and markers. This work is continued until the grass stops growing in the autumn.

MAPS AND PRINTS.

The second edition of the lithographic map of the Gettysburg National Park, printed in 1913, having been entirely exhausted, corrections and additions were made to show additional work on the battlefield, and a third edition of 500 copies, 1916, has been ordered.

A number of new tracings have been made from which many copies in blue print have been printed for use in continuing the work on the field and for distribution, together with many copies from previously drawn tracings, as they are called for, for various purposes. Such have been furnished in many cases in large numbers by the commission.

BOOK OF LOCATION OF MONUMENTS, ETC.

The fourth edition of this was placed in the hands of the printer February, 1916. The subject matter had been carefully prepared from the last edition, with additions and corrections. Five hundred copies were ordered and received May 1, 1916, and are now being distributed upon request.

A perspective drawing had been made of the Gettysburg National Park in colors, 16 by 20 inches dimensions. A contract has been

awarded for 1,000 copies, which will be ready for distribution in July, 1916.

UNITED STATES MARINES.

On July 17, 1916, a detachment of officers of the United States Marine Corps, Capt. H. S. Snyder commanding, came to Gettysburg and took quarters in the old Pennsylvania College Building. They were ordered here for the purpose of observation, and for studying, sketching, and mapping the topographical features of the battlefield.

WEST POINT CADETS.

The graduating classes of the United States Military Academy, West Point, began to make their visits to the Gettysburg Battlefield in 1902, by order of the War Department, under the command of Col. G. J. Fiebeger, United States Army, instructor in engineering. The class of 1916 reached Gettysburg this year on May 1, returning to West Point on May 3; there were 7 officers and 125 cadets.

FARMS AND BUILDINGS.

No new buildings of this character have been erected during the year. Repairs have been made to existing structures for their preservation.

Eighteen properties were under lease during the year. Ninety-five acres of land acquired by the commission were added to the acreage of the previous year, making the total acreage for the year 1,399.62.

Two changes of tenants were made during the year, one at the Masonheimer property and the other at the Bushman farm.

Three small new buildings were built during the year at each of the following places: The Masonheimer property, the Hummelbaugh property, and the Bryan House.

The tenants are required to whitewash the buildings and fencing where needed with whitewash made according to the United States Government formula.

EXAMINATION FOR BATTLEFIELD GUIDES.

In compliance with an order of the War Department the contemplated examination of the qualification of persons who for years have been acting as battlefield guides was taken up by the commission.

On August 1, 1915, notices were published that applications would be received from persons wishing to be examined as guides. Ninety-five persons applied, almost all of whom had experience on the field. They were given written examinations in classes of 10 to 15, the time extending to October 5, 1915. Ninety-one passed the examination and were given licenses.

There were three classes: Thirty-seven first class; thirty-eight second class; sixteen third class.

Four failed. None were licensed under 18 years of age.

Owing to the low percentage made by those of the second and third classes, the commission notified them that instructions in the duties of guides would be given them during the months of January and February, 1916. About 90 per cent of all that were notified reported

and took the lessons, which were given in the commission rooms in classes of 10 to 20. They were advised to continue their studies and use whatever source from which they could obtain additional information relating to the duties of guides, and in April, 1916, all that wished to take a second examination with a view of getting a higher class license could do so.

CAMP GROUNDS.

On March 20, Col. Nicholson, chairman of the commission, received a letter from the Acting Secretary of War, Maj. Gen. Hugh L. Scott, in regard to the large tracts of land on this field belonging to the United States, and if any suitable places would be available for camping and maneuvering purposes for several squadrons of Cavalry, in case such grounds were required during the summer of 1916. On March 24, the engineer, Col. Cope, made a report, by direction of the chairman, on the subject, and sent blue prints showing tracts of United States land formerly used for such purposes. The commission were notified by the Secretary of War that application for the land would not be made, consequent upon the abandonment of the contemplated encampment.

THE UNITED STATES ARMY WAR COLLEGE.

The anticipated visit of the officers of the Army War College that was to have been made in June, 1915, to Gettysburg National Park had to be postponed, as was noted in the last annual report. The visit would probably have been made during the summer of 1916, but the chairman, Col. Nicholson, was notified that the visit would again be postponed on account of the trouble on the Mexican border.

GROVES.

In clearing up the groves and other woodland of the park, many dead trees have been cut down and many fallen trees have been removed. There were 200 logs cut from these this year, of an average diameter of 17 inches, and 14 feet long. A contract was made with L. U. Collins, and with his portable sawmill he has reduced these to suitable sized lumber for the use of the carpenters in constructing and repairing United States farm buildings, etc. The cost for his services, with his mill and hands, was six-tenths of 1 per cent per foot.

Total amount of lumber sawed and piled at the storage building, 18,860 feet.

TREES.

Two hundred trees were bought from W. W. Boyer & Bro., nurserymen, Arendtsville, Pa., and apportioned to the following places: Codori farm, Smith property, Wentz property, Weikert farm, Hummelbaugh property, Althoff property, Meade's headquarters, and the Culp farm. These trees replaced those destroyed.

DRAINS.

A contract was made with Daniel C. Shealer to straighten the channel of the drain on the Culp farm, beginning at the first bridge on East Confederate Avenue, and extending to the spring, a dis-

tance of 645 feet. The drain was dug 5 feet wide at the top, 4 feet wide at the bottom, and 2 feet deep. The channel now carries off all the water and prevents any overflow on the adjoining land.

LIME.

A contract for 180 tons of lime was made with W. Oyler & Bro., lime burners, Gettysburg, Pa.

This lime was hauled by the tenants and used on the Culp, Codori, Trostle, Smith, and Weikert farms and the McMillan land. An additional contract for 180 tons has been made for the coming year.

The liming already has made a marked difference in the soil conditions and the production of better crops.

FENCING.

Since July 1, 1915, 5,050 feet of new post and rail fence was built. The material was furnished by the contractor, E. J. Naugle, Orrtanna, Pa. Four thousand feet additional will be built during the coming year. One thousand eight hundred feet of new wire fence will also be erected. Much of the old fence was repaired during the year.

All of the posts were treated with the creosote-oil preparation, as in the preceding year.

VISITORS.

On March 31 the Engineers Club of Pennsylvania College were at the offices of the commission. The party consisted of 1 instructor in engineering and 35 students. They were shown the relief maps and their construction explained, other maps, mechanical drawings, blue printing and the process, and other work of the engineers of the commission. A short talk was given; also one by their instructor on triangulation in field surveys.

On May 29, 23 officers of the Field Officers' Class Service School of the National Guard of New York called at the offices of the commission to be shown the work of the commission as contained in their maps and numerous drawings.

These officers remained in Gettysburg several days and made a very thorough study of the positions and movements of the troops in the battle.

On June 12 the New York Monuments Commission came to Gettysburg to locate positions for the statues of Gens. Robinson and Doubleday. The members were Col. Stegman, chairman; Gen. King, and Col. Beckwith, in company with the National Park Commission. The ground was selected as follows: Site for Gen. Robinson's statue, at south of the west end of Robinson Avenue in center of loop. The site for Gen. Doubleday's statue, in the center of the space between the fence and roadway on the east side of Reynolds Avenue, near right-flank marker of the One hundred and forty-second Pennsylvania.

JOHN P. NICHOLSON,
Chairman.

The SECRETARY OF WAR.

1236 GETTYSBURG NATIONAL MILITARY PARK COMMISSION.

Estimated expenditures of Gettysburg National Park Commission for the fiscal year ending June 30, 1918.

Salaries and wages:

Commissioners	\$7, 200. 00	
Engineer	2, 100. 00	
Rodman	660. 00	
Assistant superintendent.....	960. 00	
Assistant superintendent.....	600. 00	
Four guards	2, 400. 00	
Messenger	600. 00	
Hostler	480. 00	
Pay of artisans, laborers, and teams.....	17, 250. 00	
		<u>\$32, 250. 00</u>

Construction:

Piking avenues.....	4, 800. 00	
Repairs to roads, buildings, and machinery.....	2, 700. 00	
		<u>7, 500. 00</u>

Maintenance:

Traffic motor car and maintenance of motors.....	1, 200. 00	
Equipment and materials for motor truck, etc.....	550. 00	
Stationery, books, and printing.....	150. 00	
Transportation	100. 00	
Typewriting and stenography.....	500. 00	
Miscellaneous items.....	250. 00	
		<u>2, 750. 00</u>

Total 42, 500. 00

Receipts and expenditures for the fiscal year ended June 30, 1916.

[From appropriation "Gettysburg National Military Park."]

RECEIPTS.

Balance July 1, 1915.....	\$2, 267. 63
Rents from tenants on United States land, etc.....	3, 760. 06
	<u>6, 027. 68</u>
Total	

EXPENDITURES.

Lime for farms.....	\$432. 00	
Grass seed.....	40. 73	
Gun carriages and repairs.....	167. 71	
Lumber	100. 00	
Printing pamphlet, monuments, and markers.....	170. 00	
Barrel sprayer and fixtures.....	22. 50	
Herbicide (weed killer).....	150. 00	
Trees for planting in the park.....	7. 20	
		<u>1, 090. 14</u>

Balance June 30, 1916..... 4, 937. 54

[Appropriation, "Gettysburg National Military Park, 1915."]

Balance June 30, 1916..... 8. 94

Receipts and expenditures for the fiscal year ending June 30, 1916.

RECEIPTS.

Appropriation July 1, 1916..... \$45, 000. 00

EXPENDITURES.

Salaries and wages:

Commissioners, engineers, guards, artisans, and laborers..... \$29, 693. 87

Construction:

Piking avenues \$3, 434. 53
Repairs to roads, buildings, and machinery 2, 202. 87
5, 637. 40

GETTYSBURG NATIONAL MILITARY PARK COMMISSION. 1237

Maintenance:

Equipment and material for motor truck	\$401. 99	
Stationery, books, and printing	481. 06	
Transportation	125. 03	
Typewriting and stenography	303. 38	
Miscellaneous	266. 36	
		\$1, 577. 82
		\$36, 909. 09

Balance June 30, 1916..... 8, 090. 91

Outstanding obligations:

Pay rolls, June, 1915, appropriation	2, 775. 50
United States farm buildings	20. 15
Piking an avenue, cavalry field	2, 920. 00
Tablets and markers	30. 45
Fertilizers	222. 00
Fencing	517. 50
Millwork and hardware	41. 07
Paints and oils	118. 92
Ironwork and machinery	50. 04
Motor truck repairs and supplies	146. 62
Maintenance of stable	134. 87
Books, maps, and other office supplies	918. 70
Typewriting	43. 66
Cement	103. 29
Transportation	27. 97
Post-office box rent	1. 00
Miscellaneous items	19. 17

Total 8, 090. 91

Unobligated balance July 1, 1916, none.

Statement of the condition of the Gettysburg National Military Park at close of fiscal year ending June 30, 1916.

Infantry battle field land, 24 square miles (Government owned and private owned).....acres..	15, 360
Cavalry fields, 14.21 square miles (Government owned and private owned), acres.....	9, 100

Total.....acres.. 24, 460

Avenues and piked roads.....miles..	34. 06
Earth roads.....do....	24. 00

Total.....do.... 58. 06

Avenue fencing.....miles..	15. 00
Post fencing.....do....	34. 08

Total.....do.... 49. 08

Bridges:

Steel.....	2
Steel and granite.....	5
Granite—	
Double arch.....	1
Single arch.....	17

Total..... 25

Concrete culverts.....	9
Towers.....	5

1238 GETTYSBURG NATIONAL MILITARY PARK COMMISSION.

Monuments:	
Erected by States.....	454
Erected by organizations.....	383
Total.....	837
Statues:	
Bronze—	
Equestrian.....	5
Standing figures on pedestals.....	24
Standing figures on monuments.....	27
Granite statues on monuments.....	21
Total.....	77
Bronze reliefs and tablets on monuments.....	172
Bronze reliefs and tablets not on monuments.....	755
Total.....	927
Iron tablets.....	436
Markers, granite.....	321
Gun carriages with mounted guns.....	410
Caissons.....	3
Limbers.....	4

Land acquired from 1893 to date.

Acres.		Acres.	
1893.....	18. 8364	1915.....	95. 00
1894.....	218. 22	1916.....	1. 035
1895.....	72. 0657	Total.....	2, 428. 95
1896.....	531. 9842	Total acreage owned by	
1897.....	16. 3504	United States Govern-	
1898.....	. 6131	ment.....	2, 428. 95
1899.....	217. 25	Ceded by Pennsylvania for	
1900.....	144. 20	paved roads.....	45. 00
1901.....	30. 58	Total	2, 473. 95
1902.....	41. 3543	Total acreage acquired from	
1903.....	57. 9007	memorial association.....	521. 77
1904.....	93. 288	Total acreage acquired from	
1905.....	230. 117	Quartermaster Department.	30. 72
1906.....	9. 884	Total acreage acquired by	
1907.....	377. 391	Gettysburg National Park	
1908.....	1. 95	Commission.....	1, 921. 46
1909.....	120. 763	Total	2, 473. 95
1910.....	53. 30		
1912.....	1. 83		
1913.....	95. 00		
1914.....	. 045		

ARY PARK

REPORT OF THE SHILOH NATIONAL MILITARY PARK COMMISSION, 1916.

WAR DEPARTMENT,
SHILOH NATIONAL MILITARY PARK,
Pittsburg Landing, Tenn., August 7, 1916.

SIR: Report of the condition of this park and a full account of the administration of its affairs covering the fiscal year ended June 30, 1916, are herein submitted.

AREA.

No land has been purchased within the year, and the area stands at 3,546.14 acres.

The boundaries of the reservation being substantially marked with stone corner posts, it was deemed advisable to so mark all interior property lines touching the small privately owned tracts within the park limits. This work has been almost completed, 23 stone corner posts, set in cement, having been placed during the past year. This work will be finished during the present year.

It is again recommended that provision be made as soon as may be possible for the acquirement of such of the small privately owned tracts of land within the boundaries of the park as can be purchased by agreement with the owners. A sum sufficient to cover such purchases as it is believed can be advantageously made will be named in the next annual estimate from this office.

The acquirement of these properties would be doubly beneficial, in that the orderliness, sanitation, and general beauty of the park would be enhanced, and one of the most serious obstacles to the apprehension of offenders and the enforcement of law would be eliminated.

ROADS.

As a result of a rapidly improving drainage system and of the special efforts exerted to protect all roads during unfavorable weather conditions, their present state is excellent. There is not a road on the park that may not be considered a beautiful driveway.

Total of all roads graded and graveled is 27.35 miles.

The old dirt road leading from the Hamburg and Purdy Road to the Jones gravel pit, from which practically all gravel for road building and repairs is taken, became almost impassable during the winter when in heaviest use, and it was found necessary to drain and gravel same for a distance of 988 feet. It is now a permanent and serviceable road, adding greatly to the facility and economy of one of the most important features of the public work of the park.

From the post office and store building to the public barn and Government pound, a distance of 658 feet, the old unsightly dirt road has

been graveled and drained, adding another facility and eliminating an eyesore from one of the finest and most prominent lawns of the park.

In the rear of the office yard inclosure an elliptical driveway 130 feet long has been graveled and retained, for the protection of the grounds against the rough uses of wagons delivering fuel and other necessary articles to the building.

All new roads built and all repairs, improvement, and protective work done on and along the roads during the year are reported as follows:

Graded and graveled new-----	mile--	0.35
Recrowned with gravel, reshaped and rolled-----	miles--	1.00
Reshaped and rolled-----	do-----	7
Aggregate of breaks and washes refilled and graveled over all roads--	feet--	5,576
Erected granite wheel guards-----		29
Built new head walls of stone and concrete-----		2
Placed new conduits of stone tiling and concrete-----		8
Built new drainage gutters of stone and concrete-----	feet--	1,311
Built new retaining walls of stone and concrete-----	do-----	1,615

The Illinois State Monument stands between the main Corinth Road and the Hamburg and Purdy Road near their point of intersection. Being one of the most imposing memorials on the park, it draws many visitors whose vehicles have worn an irregular and unattractive road through the otherwise well-preserved field. The outlines of this forced road have been drawn into symmetrical form, and it will be graveled before the end of the present summer and made a useful and permanent driveway.

The greatest need of the park in connection with the road system is a modern steam roller, by the intelligent and timely use of which the roads can be kept compact and secure against the influences of droughts and rains.

The practically inexhaustible beds of gravel on the lands of the park eliminate one of the most costly features of road building and maintenance. With this advantage, if only the advantage of a modern roller could be added, all roads could soon be improved to perfection and kept so at a surprisingly low cost. Such a roller can be operated by one man at a maximum labor cost of from \$1.50 to \$2 per day, and a fuel cost of not more than \$1.75 per day, whereas the superannuated horsepower roller now in use on the park can not be operated for less than \$9 per day, and when operated is wholly unfit for the greater portion of the work. It can not be run close to walls and buildings nor up and down steep hills, where repairs are most frequently needed.

Because of this very pressing need an item covering cost of a roller will be included in estimate of appropriation for the year ending June 30, 1918, to be submitted by this office.

FOREST AND FIELDS.

About 900 dead trees were removed from the park during the year. This practically clears the reservation of dead timber, and makes it possible to observe with reasonable accuracy the death rate among the trees, which is very low.

False growth limbs near the ground are being trimmed from all trees along the roads and in places where the most important battle

lines have been marked, so as to give to the trees more vitality, to restore their natural symmetry, and to widen the scope of view where monuments and battle-line markers are most prominent.

This trimming is done during the winter season, in order that no damage to the trees may result.

A number of historic trees, and trees that are special features of beauty along roads, have been protected from abuse by the erection of concrete guards and retaining walls.

This work will be continued where important trees are exposed.

An investigation is now being made by this office to ascertain the ages of trees of various species and sizes on the park. This is being done by the comparison of park trees with trees of the same species grown in the same character of soil, outside the battle lines, the ages of which it is an easy matter to ascertain by cutting them and counting their concentric rings.

This was suggested by the fact that visitors, veteran soldiers and students of history are so frequently curious as to whether or not certain trees were here at the time of the battle; and, if so, how large they were at that time.

By reference to the record now being made, when completed, any guide of the park can answer such questions with approximate accuracy.

The fields and open spaces of the park are being made more attractive each year, by improved drainage, the gradual elimination of weeds, and the spreading of grasses.

In covering bare places along roads, new gutters, and retaining walls, and around the historic oaks and the siege guns which mark the center of Gen. Grant's last line on the first day of the battle, 13,448 square feet of Bermuda sod have been successfully placed during the year.

The plan inaugurated two years ago for the propagation of Bermuda grass in one of the fields of the reservation for the purpose of providing the sod so much needed in the general work of improvement is giving most satisfactory results.

Aside from the beauty of smooth green fields and clean woods, their practical good lies in the fact that visitors can follow the battle lines and seek points of superior interest on the field with rapidity and comfort.

On a back field of the reservation, outside all battle lines, 3,960 pounds of hay and 108½ bushels of corn were produced and fed to the park horses, materially reducing the forage expense for the year.

Four more old open, unused wells, which were sources of more or less danger, were disposed of by filling and concreting over, these being the last of a number of such wells that have been similarly disposed of within the last few years.

Nearly all of the old rail fences interlaced with weeds and briars, and with no historic significance, have been cleared away, making some important points more accessible, and widening the view of monuments and battle lines.

BUILDINGS AND QUARTERS.

Gradual, modest improvement of the residence properties occupied by the employees of the park, has been the aim of this office,

to the end that they may all be made plainly comfortable and sanitary as soon as possible.

The work of clearing away all old unsightly buildings too dilapidated for use, and with no historic significance, is being carried on under the approval of the department, and a vast improvement in many ways has been the result. Much insanitary débris has been destroyed; landscapes have been brightened; battle lines have been cleared, and monuments and markers brought into plainer view.

The McDaniel house and outhouses, the Chambers Road house and outhouses, and the Sanders house and outhouses, were razed during the year.

All public buildings are in good condition.

PUBLIC SERVICE.

It is again urged that a hotel should be provided for the accommodation of visitors to the park.

The sum of \$10,000 was asked for in the last annual estimate from this office, and the item was approved by the department, but rejected by Congress.

The item will be included in next annual estimate, in the hope that it may again have the approval of the department, and that more convincing evidence of the necessity of the hotel may be offered to the Appropriations Committees of the Senate and the House.

TRANSPORTATION.

The Illinois Central, the Southern, and the Mobile & Ohio Railroad lines touch Corinth, Miss., from which point automobiles reach the park over a most excellent pike in about one hour.

Excursion boats of the St. Louis & Tennessee River Packet Co. make weekly trips to the park during the summer and autumn months, bringing crowds of interested people to the battle field. Many of these excursion parties are made up in Chicago and St. Louis and in the more distant cities and towns of the Northwest, coming by rail to St. Louis and thence by boat.

All boats remain for several hours, giving visitors time to see the battle field. Hacks and automobiles are available for their accommodation.

BATTLE LINES.

Permanent iron tablets on the battle field are as follows:

Battle-line tablets.....	399
Camp-site tablets.....	83
Historical tablets.....	24
Headquarters tablets.....	12
Mortuary tablets.....	5
General explanatory, hospital, and road signs.....	257
Total.....	780

To designate the shifting positions of the artillery of both armies during the progress of the battle, 250 cannon, true to the types of guns used here, have been placed on iron carriages.

All battle-line tablets, cannon, and carriages are so cared for as to protect them from rust.

MONUMENTS.

The 137 monuments in the park are classified as follows:

Union :	
Illinois, 1 State, 39 regimental.....	40
Indiana, 22 regimental.....	22
Iowa, 1 State, 11 regimental.....	12
Minnesota, 1 regimental.....	1
Ohio, 34 regimental.....	34
Pennsylvania, 1 regimental.....	1
Wisconsin, 1 State, 1 individual.....	2
United States Regular troops, 3 regimental.....	3
Confederate :	
Alabama, 1 State.....	1
Arkansas, 1 State.....	1
Louisiana, 1 regimental.....	1
Tennessee, 1 regimental.....	1
Mortuary	5
Headquarters	13
Total	137

NEW MONUMENT.

The Confederate monument approved by the department, and now being erected on this battle field by the United Daughters of the Confederacy, at a cost of \$50,000, will be completed within the next two and one-half months, and the unveiling ceremonies have been announced to take place late in October.

The foundation is now being finished, and this office has received notice from the contractors that the work will proceed without delay.

PROSPECTIVE MONUMENT.

This office has had correspondence with the governor of the State of Michigan which indicates that a movement will be pressed before the next legislature of that State to secure an appropriation for the building of a monument on this field in honor of the Michigan troops who fought here.

It is confidently expected that this provision will be made in time for the monument to be erected early in next spring, so that it may be unveiled either on the 6th of April, the anniversary of the first day of the Battle of Shiloh, or on May 30 (Decoration Day).

HISTORY OF THE BATTLE.

During the year, 45 copies of The Battle of Shiloh and Organizations Engaged were sold, and 159 copies were distributed free to the survivors of the battle, their widows, and descendants, leaving on hand at the close of the year, 263 copies.

GENERAL.

Among the general purposes of this office are the continued development of a sanitary system, a strict preservation of law and order by bringing all offenders to justice with the least possible delay, the promotion of a dignified publicity under the approval of the department, that the country may know more of Shiloh, the first great battle of the Civil War, and that this park may be a real asset to the Nation in the promotion of patriotism and the stimulation of love and respect for the flag.

ACCOUNTS.

CASH COLLECTIONS.

Rents, privileges, sales of histories, fines and stock impounding charges -----	\$793. 53
Remitted to the Treasurer of the United States -----	793. 53

RECEIPTS AND EXPENDITURES.

Available balance July 1, 1915, "no year" appropriation -----	\$74. 82
---------------------------------------------------------------	----------

EXPENDITURES.

From balance July 1, 1915, "no year" appropriation:	
Materials and supplies—gasoline, axle grease, etc -----	\$7. 36
Passenger-carrying vehicles—	
Fan belt -----	\$0. 41
Cylinder oil -----	. 50

	. 91
Incidentals—	
Ice -----	7. 50
Feed and care of impounding stock -----	1. 70

	9. 20

Total -----	\$17. 47
Balance available July 1, 1916, "no year" appropriation -----	56. 85

RECEIPTS.

Appropriation for fiscal year 1916 -----	\$25, 800. 00
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EXPENDITURES.

Administration:	
3 commissioners, at \$3,000 -----	\$9, 000. 00
1 secretary and superintendent -----	3, 000. 00
1 clerk -----	900. 00

	\$12, 900. 00
Mounted guards: 1 range rider -----	960. 00
Printing and office supplies:	
Making monument map -----	23. 00
Letter files, etc -----	7. 20
Mop, glass, and duster -----	6. 00
Receipt books -----	. 35
Printing regulations -----	19. 30
Printing office stationery -----	20. 17
Printing annual reports -----	25. 16
Films, printing same, etc -----	10. 49
Freight on office supplies -----	2. 33
Flags, sweeps, and pans -----	7. 38

	121. 38
Equipment, materials, and supplies:	
Lime and cement -----	322. 60
Kerosene -----	43. 09
Crude oil -----	89. 45
Tiling -----	34. 10
Lumber -----	313. 77
Paints and brushes -----	334. 95
Hardware, fencing, etc -----	664. 46
Iron piping -----	24. 00
Fence posts -----	23. 66
Bicycle tires and flash light -----	5. 63
Shrubbery -----	12. 00
Forage -----	231. 88
Carbolic acid and borax -----	44. 70
Grass seed -----	12. 44
Pump and fixtures -----	23. 70

	2, 180. 43
Telephone service -----	54. 00

Passenger-carrying vehicle—

Gasoline, lubricating oil, and repair parts-----	\$376. 68
Repair work -----	115. 81

\$492. 49**Labor:**

Forest and fields-----	3, 650. 54
Roads and bridges-----	2, 397. 81
Buildings and quarters-----	1, 584. 57
Monuments and markers-----	172. 27
Gun carriages-----	84. 38
Special guards-----	120. 74
Blacksmithing-----	23. 25
Janitor-----	540. 00
Hostler-----	373. 00
Office-----	34. 50
Surveying-----	16. 00

8, 997. 06**Incidentals:**

Feed and care of impounding stock-----	20. 90
Tollgate fees-----	51. 65
Hauling freight-----	. 50
Ice-----	10. 32
Official badge-----	1. 00
Department telegrams-----	. 67
Printing park views-----	3. 60
Hire of gasoline boat-----	6. 00

94. 64**Total----- 25, 800. 00****Balance----- None.****RECAPITULATION.****Receipts:**

Balance July 1, 1915, "no year" appropriation-----	\$74. 32
Appropriation for fiscal year 1916-----	25, 800. 00

Total receipts----- 25, 874. 32 .**Expenditures:**

From "no year" appropriation-----	\$17. 47
From appropriation fiscal year 1916-----	25, 800. 00

Total expenditures----- 25, 817. 47**Available balance July 1, 1916, "no year" appropriation-- \$56. 85****Unexpended balance July 1, 1916, appropriation fiscal year 1916----- None.****Total balance----- 56. 85****Statement showing the condition of the Shiloh National Military Park at the close of fiscal year ended June 30, 1916.**

Park area-----	acres--	3, 546. 14
Roads graded and graveled-----	miles--	27. 35
Buildings: Office, pavilion, store and post office, landing warehouse, stock and storage barns, carpenter and blacksmith shops, and magazine (9); residence properties (28)-----		37

Battle-line tablets:

Union-----	226
Confederate-----	173

399

General explanatory, hospital, and road signs-----	257
Camp-----	83
Historical-----	24
Headquarters-----	12
Mortuary-----	5

381**Grand total of all tablets and markers----- 780**

1248 SHILOH NATIONAL MILITARY PARK COMMISSION.

Monuments:

Union -----	115
Confederate -----	4
Mortuary -----	5
Headquarters -----	13

Grand total of all monuments -----	137
Mounted cannon -----	250

Respectfully submitted.

DE LONG RICE,
Secretary and Superintendent.

Approved:

D. W. REED, *Chairman.*

THE SECRETARY OF WAR.

**REPORT OF THE VICKSBURG NATIONAL MILITARY PARK
COMMISSION.**

69176°—WAR 1916—VOL 1——79

1249

REPORT OF THE VICKSBURG NATIONAL MILITARY PARK COMMISSION.

WAR DEPARTMENT,
VICKSBURG NATIONAL MILITARY PARK COMMISSION,
Vicksburg, Miss., July 13, 1916.

SIR: The commission has the honor to submit its report for the fiscal year ended June 30, 1916.

PARK AREA.

By authority of Congress, the Secretary of War conveyed 1.64 acres to the Congregation Anshe Chesed for cemetery purposes and without consideration. Area, 1,322.63 acres; cost per acre, \$47.35. Expenditure by United States under this head from the first, \$66,511.53 (includes cost of conveyancing).

CARE OF PARK AREA.

Expenditure by United States under this head, formerly clearing land, during year, \$6,941.21; from the first, \$71,221.14.

ROADS AND BRIDGES.

Length of finished roadway, including 16 bridges, 31.86 miles; cost per mile, exclusive of bridges, \$12,923.05; cost of bridges, \$116,449. Expenditure by United States under this head during year, \$4,596.08 (maintenance); from the first, \$578,661.58.

TABLETS AND GUIDEBOARDS.

Exclusive of 122 iron guideboards, 898 tablets are in place (897 by United States, 1 gift); 569 Union, 329 Confederate (31 bronze, 867 iron); 163 historical, 197 battery, 227 Union trench marker, 151 Confederate trench marker, 136 Union approach marker, 19 headquarters, 5 mortuary. Expenditure by United States under this head during year, \$180.45 (painting); from the first, \$21,199.63.

CANNON AND GUN CARRIAGES.

Number of guns mounted, 128 (114 field, 14 siege); 66 Union, 62 Confederate. Expenditure by United States under this head during year, \$169.20 (painting); from the first, \$20,406.80.

OBSERVATION TOWERS.

Expenditure by United States under this head: During year, \$115.90 (repairs); from the first, \$27,749.90.

MEMORIALS, MONUMENTS, AND MARKERS.

The commission contracted for one bronze portrait statue with granite pedestal (Union) at a cost of \$2,543, one bronze portrait bust with granite pedestal (Union) at a cost of \$800, one bronze portrait bust (Confederate, pedestal theretofore placed) at a cost of \$537, eight bronze portrait tablets with granite pedestals (7 Union, 1 Confederate) at a cost of \$3,006, and for one portrait tablet pedestal (Union) at a cost to the no year appropriation of \$185. One memorial bronze portrait tablet and one memorial bronze portrait bust with granite pedestal are under contract. The Missouri commission contracted for 16 monument markers (8 Union, 8 Confederate) and 34 markers (24 Union, 10 Confederate). Number of memorials, monuments and markers in place or under contract, 646 (3 Union-Confederate, 527 Union, 116 Confederate): 108 by United States at a cost of \$213,444.35 (1 Union naval monument with 4 bronze portrait statues, \$144,041; 1 bronze portrait statue with granite pedestal, Union, \$2,543; 49 bronze portrait busts with granite pedestals, 23 Union and 26 Confederate, \$43,363.30; 54 bronze portrait tablets with granite pedestals, 41 Union and 13 Confederate, \$23,097.05; 3 markers, 2 Union-Confederate and 1 Union, \$400); 478 by States (1 Union-Confederate, Missouri State memorial, 435 Union, 42 Confederate; and 60 as gifts (25 Union, 35 Confederate) at a cost of \$70,743.30. Expenditures by United States under this head during year, \$15,942.47; from the first, \$257,733.98.

MEMORIAL BRONZE PORTRAITS OF OFFICERS.

In place or under contract, as follows: By United States. Statues: Davis, Farragut, Foote, Ord, Porter—5 (Union). Busts: J. Adams, D. W. Adams, Baldwin, Bowen, Breckinridge, Carr, Cosby, Crocker, Dennis, Ector, Ellet, Evans, Featherston, Ferrero, French, Gist, Gregg, Helm, Herron, Hovey, Jackson, Kimball, Lauman, Lawler, Loring, Maury, Maxey, McNair, Osterhaus, Potter, Quinby, Ransom, Sanborn, A. J. Smith, G. A. Smith, M. L. Smith, W. S. Smith, C. L. Stevenson, Stovall, Taylor, Thayer, Tracy, Tuttle, Vandever, Walker, Waul, Welsh, Whitfield, Woods—49 (23 Union, 26 Confederate). Tablets: Alexander, Benton, Boomer, Chambers, Cockerill, Comstock, Cumming, Dockery, Engelmann, Erwin, Ewing, Farrar, Green, Griffin, C. Hall, W. Hall, Hains, Harris, Hicks, Holmes, Johnson, Keigwin, Landram, Lightburn, Lindsey, Lockett, Loomis, Manter, McGinnis, McMillen, Moore, Neely, Orme, Prime, Pugh, Putnam, Raum, Rawlins, Reid, A. E. Reynolds, W. W. Reynolds, Richmond, Ross, Sanford, Sheldon, Shepard, Shunk, J. D. Stevenson, Vaughn, Washburn, Washington, C. C. Wilson, J. H. Wilson, Witherspoon—54 (41 Union, 13 Confederate). Total by United States, 108 (69 Union, 39 Confederate). By States (tablets): Pennsylvania—Brenholtz, Curtin, Durell, Hartranft, Leasure—5 (on front of State memorial). Wisconsin: Bryant, Harris, Montgomery—3. Total by States, 8. Gifts—Statues: Hickenlooper, S. D. Lee, Steele, Vilas—4 (3 Union, 1 Confederate). Busts: Blair, Burbridge, Garrott, Selfridge—4 (3 Union, 1 Confederate). Tablets: Barton, Buford, Bussey, Cockrell, Force, Garrard, Hebert, Higgins, Jenney, Jones, Leggett, Lightfoot, Marks, Martin, Matthies, Mower, Richardson,

Slack, Shoup, M. Smith, T. K. Smith, Thomas, Wade, J. J. Woods—24 (12 Union, 12 Confederate). Grand total, 148 (95 Union, 53 Confederate); 108 by United States (68 Union, 40 Confederate); 8 by States (Union); and 32 gifts (18 Union, 14 Confederate) at a cost of \$65,207.85 (4 statues, 4 busts, 24 tablets). Expenditure by United States under this head during year, \$13,832.25; from the first, made and obligated and exclusive of the 4 statues at the Union naval monument, \$69,188.35 (1 statue and pedestal, 49 busts and pedestals, 54 tablets and pedestals, 1 tablet pedestal).

STATE MEMORIALS.

Twelve have been erected from appropriations made by States as follows—Illinois: Organizations, 78; appropriation, \$285,000; cost of memorial, \$200,000. Iowa: Organizations, 32; appropriation, \$150,000; cost of memorial, \$100,000. Massachusetts: Organizations, 3; appropriation, \$5,000; cost of memorial, \$5,000. Michigan: Organizations, 9; appropriation, \$20,000; cost of memorial, \$20,000. Minnesota: Organizations, 4; appropriation, \$25,500; cost of memorial, \$25,000. Mississippi: Organizations, 41; appropriation, \$50,931; cost of memorial, \$45,000. Missouri: Organizations, 42 (27 Union, 15 Confederate); appropriation, \$50,000; cost of memorial (Union-Confederate), \$40,000. New Hampshire: Organizations, 3; appropriation, \$5,000; cost of memorial, \$5,000. New York: Organizations, 4; appropriation, \$12,500; cost of memorial, \$12,000. Pennsylvania: Organizations, 5; appropriation, \$15,000; cost of memorial, \$15,000. Rhode Island: Organization, 1; appropriation, \$5,000; cost of memorial, \$5,000. Wisconsin: Organizations, 17; appropriation, \$130,000; cost of memorial, \$100,000.

APPROPRIATIONS MADE FROM THE FIRST.

By United States, \$1,421,200. By 15 States, \$872,931 (including Alabama, 19 organizations, \$25,000 authorized, no expenditure; Indiana, 28 organizations, \$38,000 for monuments and markers in place; Ohio, 39 organizations, \$56,000 for monuments and markers in place). Maryland and Virginia were each represented on this battlefield by one Confederate battery and their monuments have been placed, as a gift in each case.

APPROPRIATIONS DESIRED.

By United States, for a Confederate naval monument at the approved site and at a cost not to exceed \$150,000. By States as follows: Arkansas—15 organizations; for a State memorial, 4 monuments, and 1 marker. Florida—3 organizations; for a State memorial. Georgia—21 organizations; for a State memorial and 3 monuments. Indiana—for a State memorial. Kansas—1 organization; for a State memorial. Kentucky—12 organizations (4 Union, 8 Confederate); for a State memorial (Union-Confederate), 2 monuments (1 Union, 1 Confederate), and 5 markers (Union). Louisiana—41 organizations; for a State memorial (all monuments and 7 portraits of officers in place as gifts). North Carolina—3 organizations; for a State memorial. Ohio—for a State memorial and statues of

1254 VICKSBURG NATIONAL MILITARY PARK COMMISSION.

Gens. J. B. McPherson and W. T. Sherman. Pennsylvania—5 organizations; for a statue of Gen. J. G. Parke. South Carolina—12 organizations; for a State memorial. Tennessee—29 organizations; for a State memorial and 1 monument (3 monuments placed as gifts). Texas—15 organizations; for a State memorial and 2 monuments (1 monument placed as a gift). Virginia—1 organization; for an equestrian statue of Gen. J. E. Johnston. West Virginia—1 organization; for a State memorial and 4 markers. Wisconsin—17 organizations; for a statue of Gen. C. C. Washburn.

Receipts and expenditures were as follows:

Receipts:

Balance July 1, 1915, no year appropriation..... \$5, 174. 28

Expenditures:

From balance of July 1, 1915, no year appropriation—

Payment in July, 1915, Jordan Wynn account..... 86. 57

For one portrait tablet pedestal, as per contract..... 185. 00

Total expenditures from no year appropriation..... 271 57

Outstanding obligations—

Payment to be made on Gen. Forney statue..... 1, 000. 00

Possible retaining wall, as per W. D. 13057/24..... 520. 00

Total outstanding obligations, no year appropriation..... 1, 520. 00

Balance available July 1, 1916, no year appropriation..... 3, 382. 71

Receipts:

Balance available July 1, 1915, 1914 appropriation..... 3, 441. 75

Expenditures:

From balance of July 1, 1915, 1914 appropriation—

For bronze portraits, as per contracts..... 3, 441. 75

Balance available July 1, 1916, 1914 appropriation..... None.

Receipts:

Balance July 1, 1915, 1915 appropriation..... 8, 935. 01

Expenditures:

From balance of July 1, 1915, 1915 appropriation —

June, 1915, pay rolls and accounts..... 2, 222 51

For bronze portraits, as per contracts..... 5, 992 50

Total expenditures from 1915 appropriation..... 8, 215. 01

Outstanding obligations, 1915 appropriation—

For bronze portraits, as per contract..... 720. (n)

Balance available July 1, 1916, 1915 appropriation..... None.

Receipts:

Appropriation for fiscal year 1916..... 36, 000. 00

Expenditures:

From appropriation for fiscal year 1916—

Salaries of commissioners..... 9, 900. 00

Salary of engineer..... 2, 200. 00

Pay of artisans, foremen, laborers, messenger, and teams..... 12, 396. 32

For office supplies and expenses..... 136. 09

For cement, crushed stone, gravel, and sand..... 682. 68

For lumber, hardware, paint, tools, and repairs..... 515. 48

For memorial bronze portraits and granite pedestals..... 4, 213. 00

Total expenditures from 1916 appropriation..... 30, 043. 57

Expenditures—Continued.

From appropriation for fiscal year 1916—Continued.

Outstanding obligations—

For bronze portraits, as per contracts.....	\$2, 673. 00
June, 1916, pay rolls and accounts (\$352 for bridge plank)...	2, 643. 80
For road gravel, 473.8 cubic yards ordered from Mississippi Gravel Co., at \$1.35 per cubic yard.....	639. 63

Total outstanding obligations, 1916 appropriation..... 5, 956. 43

Balance available July 1, 1916, 1916 appropriation..... None.

RECAPITULATION.

Receipts:

Balance July 1, 1915, no year appropriation.....	5, 174. 28
Balance July 1, 1915, 1914 appropriation.....	3, 441. 75
Balance July 1, 1915, 1915 appropriation.....	8, 935. 01
Appropriation for fiscal year 1916.....	36, 000. 00

Total receipts..... 53, 551. 04

Expenditures (made and obligated):

From no year appropriation.....	1, 791. 57
From balance July 1, 1915, 1914 appropriation.....	3, 441. 75
From balance July 1, 1915, 1915 appropriation.....	8, 935. 01
From appropriation, fiscal year 1916.....	36, 000. 00

Total expenditures..... 50, 168. 33

Available balance July 1, 1916, no year appropriation.....	3, 382. 71
Available balance July 1, 1916, 1914 appropriation.....	None.
Available balance July 1, 1916, 1915 appropriation.....	None.
Available balance July 1, 1916, 1916 appropriation.....	None.

Total available balance July 1, 1916..... 3, 382. 71

ESTIMATES FOR FISCAL YEAR ENDING JUNE 30, 1918.

For continuing the establishment of the park; compensation of civilian commissioners; engineer and clerk, labor, iron gun carriages, mounting siege guns, memorials, monuments, markers, and historical tablets giving historical facts compiled without praise and without censure; maps, surveys, roads, bridges, restoration of earthworks, purchase of land, purchase and transportation of supplies and materials; and other necessary expenses, \$33,000.

For the construction of a Confederate naval monument to cost not to exceed \$150,000, at the approved site and in accordance with designs to be approved by the Secretary of War, \$50,000.

Approximately and not including those for the proposed Confederate naval monument, estimated expenditures for the fiscal year ending June 30, 1918, are itemized as follows:

Salaries of civilian commissioners.....	\$10, 800
Salary of engineer and clerk.....	2, 400
Pay of artisans, foremen, laborers, messenger, and teams.....	13, 500
Office supplies and expenses.....	200
Cement, crushed stone, gravel, and sand.....	1, 300
Lumber, hardware, paint, tools, and repairs.....	1, 200
Memorial bronze portraits and granite pedestals.....	3, 600

Total..... 33, 000

STATEMENT OF THE CONDITION OF THE PARK JUNE 30, 1916.

Area, 1,322.63 acres; cost per acre, \$47.35.

Miles of roadway, 31.86; cost per mile exclusive of 16 bridges, \$12,923.05; cost of bridges, \$116,449.

Number of guns mounted, 128—66 Union, 62 Confederate.

Number of tablets in place, 898 (897 by United States, 1 gift)—31 bronze, 867 iron (569 Union, 329 Confederate).

Number of iron guideboards in place, 122.

Number of memorials, monuments, and markers in place or under contract, 646 (3 Union-Confederate, 527 Union, 116 Confederate)—108 by United States (2 Union-Confederate, 67 Union, 39 Confederate), 478 by States (1 Union-Confederate, Missouri State memorial; 435 Union; 42 Confederate), and 60 as gifts (25 Union, 35 Confederate), at a cost of \$70,743.30.

Number of memorial bronze portraits of officers in place or under contract, 148 (95 Union, 53 Confederate)—108 by United States (69 Union, 39 Confederate), 8 by States (Union), and 32 gifts (18 Union, 14 Confederate), at a cost of \$65,207.85.

Number of monuments and markers in place as gifts, 28 (7 Union, 21 Confederate), at a cost of \$5,535.45.

Appropriations made from the first: By United States, \$1,421,200; by 15 States, \$872,931.

WM. T. RIGBY,
Chairman of Commission.

The SECRETARY OF WAR.

INDEX.

[The figures indicate the pages.]

A.

Academy, Military. *See* United States Military Academy.
 Adjutant General, report, 235-294.
 Adjutant General's office:
 civilian employees, 294.
 current work, 286.
 Aero squadron, 862, 863.
 Aeronautics. *See* Aviation.
 Age of recruits, 676.
 Aircraft, 1172.
 Alaska:
 clothing in, 348.
 defense of, 219.
 in general, 558.
 military telegraph lines, 440.
 operations of Signal Corps, 865.
 Ambulance company (no. 7), 8.
 Ammunition, 183, 846, 848, 851.
 Anti-aircraft artillery, 830.
 Armament of fortifications, 823, 832.
 Armor plate tests, 837.
 Armored motor cars, 833.
 Army:
 admissions to sick reports, 710, et seq.
 colonial regiments, 302.
 cooperation of different arms, 302.
 deaths, 484, 508, et seq.
 discipline, 300.
 diseases, 706, 738, 750, 756-758, et seq.
 distribution, geographical, 465.
 functions, 215.
 health, 29, 195, 466.
 home service, distribution of, 222.
 instruction, 300. *See also* Schools.
 legislation to increase, 470.
 recruiting, 24.
 sanitation, 29.
 strength:
 actual, 23, 26, 236.
 authorized, 26, 235.
 increased, 26, 28, 237.
 vocational training, 36, 1170.
 Army Medical Museum, 472, 670.
 Army Medical School, 471, 632.
 Army Nurse Corps, 473.
 Army powder factory, 824.
 Arrangement of annual reports, 1.
 Arsenals:
 Augusta, 852.
 Benicia, 853.
 Frankford, 845.

Arsenals—Continued.

New York, 852.
 Picatinny, 854.
 Rock Island, 838.
 San Antonio, 853.
 Watertown, 851.
 Watervliet, 849.
 Arthur, Col. William H., Medical Corps,
 department surgeon, 465.
 Articles by medical officers, 655-659.
 Articles of War, revision of, 47, 200, 309.
 Augusta Arsenal, 852.
 Automobiles, 449.
 Aviation:
 civilian schools, 889.
 equipment, 41.
 on Mexican border, 201.
 organization, 884.
 progress, 40.
 schools, 41, 861, 883.
 section, 884-889.
 Aviators:
 civilian, 863.
 clothing, 351.
 National Guard, details for, 890.
 number of, 42.
 pay rate, 888.
 requirements for, 885.

B.

Badges, service, 292.
 Bake ovens, 361.
 Baker, Hon. Newton D., Secretary of
 War, report, 5-151.
 Bakers and cooks' manual, 341.
 Band instruments, 353.
 Barracks and quarters, 395, 553.
 Benicia Arsenal, 853.
 Birmingham, Col. Henry P., Medical
 Corps:
 Acting Surgeon General, report, 465-
 801.
 department surgeon, 465.
 Bliss, Maj. Gen. Tasker H., investiga-
 tions of, 345.
 Board of Ordnance and Fortification,
 59.
 Board of Visitors, United States Military
 Academy, 1216.
 Boyd, Capt. Charles T., killed in Mexico,
 9.
 Burial Corps, 334, 394.

O.

Cable ship, 873.
 Cable system, 201.
 Camps:
 of instruction, 274.
 training, 38.
 Canal Zone:
 armament, 831.
 troops in, 241.
 Canteens. *See* Post exchanges.
 Capacity for production of war material, 822.
 Carrizal incident, 9, 279.
 Cavalry, Chief of, needed, 185.
 Cavalry:
 drill, 177.
 equipment, 176, 178.
 Mounted Service School, 177.
 recruiting, 175.
 service regulations, 177.
 Cemeteries:
 Morgue and Burial Corps, 394.
 national, 332-336.
 Censorship in peace, 206.
 Charts, medical, 481 et seq.
 Chicago Drainage Canal, 65.
 Chickamauga and Chattanooga National Military Park:
 buildings, 1222.
 field work, 1221.
 leases, 1222.
 licenses, 1222.
 monuments, etc., 1222.
 roads, 1221.
 Southern Military Training Camp, 1223.
 Chief of Coast Artillery, report, 1163-1177.
 Chief of the Militia Bureau, report, 895-1160.
 Chief of Ordnance, report, 805-856.
 Chief of Staff, report, 155-231.
 Chief Signal Officer, report, 859-891.
 China, deaths and diseases, 611.
 Citizen soldiers, 226.
 Citizens, training of, 35, 171, 174.
 Civilians, commissioning of, 165.
 Clerks:
 retirement of, 68.
 superannuation of, 69.
 Clothing, 346-348, 351-355, 553.
 Coast Artillery Board, 1176.
 Coast Artillery Corps:
 aircraft, 1172.
 appropriation for, 1174.
 armament, 1163.
 Board of Review projects, 1173.
 commanders, 1166.
 deficiency in National Guard, C. A., 1164.
 detachment of force, 1165.
 distribution of force, 1163, 1169.
 district commanders, 1166.
 Fort Morgan test, 1172.
 improvements, 832.
 instruction, 1170.
 legislation recommended, 1167.
 mine planter crews, 1169.

Coast Artillery Corps—Continued.

 practice, 834.
 relation with mobile army, 1167.
 report, 1163.
 strength, 1169.
 target practice, 834, 1171.
 torpedo depot, 1117.
 vocational training, 1170.
 Coast Artillery School, 1176.
 Coast defense, joint exercises, 274.
 Coast defense projects, revision of, 1174.
 Colleges, "distinguished," 253. *See also* Schools.
 Colored troops, 499, 533, 561, 583, 726, 738, 750, 768.
 Columbus, N. Mex., raid on, 7, 186, 278.
 Construction and repair, 356-359, 362, 366.
 Cope, Lieut. Col. E. B., engineer, Gettysburg National Military Park Commission, 1229.
 Council of National Defense, 38.
 Crosby, Col. William D., Medical Corps, department surgeon, 466.
 Crowder, Brig. Gen. E. H., Judge Advocate General, report, 309-328.
 Crozier, Brig. Gen. William, Chief of Ordnance, report, 805-856.

D.

Deaths, 484, 487, 491, 559, 564, 714, 720, 732, 756, 768, 775, 780, 784, 790.
 Demobilization of the second division, 278.
 Department surgeons, 465.
 Departments, no change, 239.
 Desertion, 200, 256, 314, 318.
 Detached service law, 168.
 Dickson, Lieut. Col. T. C., Ordnance Department, member of ordnance board, 855.
 Disciplinary barracks, U. S., 282.
 Distribution of War Department documents, 288.
 Dyestuffs, scarcity of, 349.

E.

Ebert, Col. Rudolph G., Medical Corps, department surgeon, 465.
 Edie, Col. Guy L., Medical Corps, department surgeon, 465.
 Efficiency system needed in Government arsenals, 55.
 Enlisted men:
 admissions to sick reports, 710-791.
 assisted in obtaining employment at close of service, 24.
 certificates of merit, 292.
 classified, 962.
 Coast Artillery practice, 1176.
 condition of, in Alaska, 868.
 desertions, 256.
 discharges—
 by disability, 263.
 by order, 262.
 for technical work, 165.
 influence of disease on, 542.

Enlisted men—Continued.

invalided home, 568, 593, 606.
 mental alienation, 529.
 pay on reserve, 165.
 Porto Rican, 686.
 prevalence of special diseases, 565.
 prohibited from civil work, 165.
 Reserve Corps, 226, 272-274.
 restoration of citizenship, 261.
 retired, 251.
 roster of, in Civil War, 290.
 time of service, 165.

Equipage, 346, 432.

Equipments:

Cavalry, improvements, 819.
 Infantry, 819.
 personal and mess, 839.

European war, medico-military observers, 472.

Examinations for promotions, 45.

Expedition into Mexico, 187, 474.

F.

Federalization of militia, 11-18.

Fences, 361.

Field Artillery:

changes in project for, 828.
 machine guns, 60, 824.
 matériel, 827.
 organization, proposed, 179.
 practice, 834.

Field Artillery, Chief of, needed, 185.

Field supply depot, 347.

Fire control, 874.

Forage, 386.

Foreign armies, comparison with ours in health, 500.

Fort. *See* proper name as in the Army list, e. g., Myer, Fort.

Frankford Arsenal, 845.

Fuel, 362, 392.

Fuzes, 848.

G.

Gandy, Col. Charles M., Medical Corps, department surgeon, 466.

Garlington; Brig. Gen. E. A., Inspector General, report, 297-306.

Garrison, Hon. Lindley M., resignation, 7.

Gatley, Maj. G. G., Third Field Artillery, member of ordnance board, 855.

General Staff Corps:

functions, 49, 167.
 publications, 1231.

Geographical departments, no change, 239.

Gettysburg National Military Park:

book, descriptive, 1232.
 construction and repair, 1231.
 contracts, 1229.
 financial statement, 1236.
 guides, examination for, 1233.
 gun carriages, 1231.
 maps and prints, 1232.
 monuments, etc., 1229.

Gettysburg National Military Park—Con. officers, 1229.

roads, 1231.

visits for observation and study, 1233.

Glenn Spring, Tex., raid on, 280.

Grosvenor, C. H., chairman, Chickamauga and Chattanooga National Military Park Commission, report, 1221-1226.

Guantanamo, defense of, 219.

Guns, machine, 60.

H.

Hamilton, Maj. Alston, Coast Artillery Corps, member of ordnance board, 855.

Hammond radiodynamic system of torpedo control, 59, 1175.

Hancock, Fort, Tex., raid in vicinity, 10.

Harbor defenses, 181.

Harris, Col. Henry S. T., Medical Corps, department surgeon, 466.

Hawaii:

defense of, 218.

operations of Signal Corps, 870.

Hawaiian Department:

enlisted strength, 241, 594.
 influence of station on Army, 592.
 sanitation, 602.

Honor medals, 291.

Honor schools, 254.

Hospitals:

construction and repair, 663.

department—

Honolulu, Hawaii, 632.

Manila, P. I., 629.

general—

Army and Navy, Hot Springs, Ark., 625.

Fort Bayard, N. Mex., 622.

Letterman, San Francisco, Cal., 613, 638.

Walter Reed, Takoma Park, D. C., 616.

nonmilitary—

Providence, Washington, D. C., 634.

Saint Elizabeths, Washington, D. C., 282.

Hospital train, 197, 473.

I.

Identification system, 288.

Index-catalogue of medical literature, 471-472.

Index-record card work, 290.

Industries, mobilization of, 207.

Infantry, chief of, needed, 185.

Inspector General, report, 297-306.

Inspector General's office:

inspections, 297.

new duties, 298.

Officers' Reserve Corps, 299.

International military medical statistics, 791.

International nomenclature, 476.

J.

Judge Advocate General, report, 300-328.
 Judge Advocate General's department:
 civil work, 315.
 offenses classified, 319.
 reorganization, 309.
 revisional publications, 312, 314.
 trials, 312, 321.

K.

Kitchens, rolling, 195, 341.

L.

Laboratories:
 Army and Navy General Hospital, 629.
 Army and Navy Medical School, 471.
 Fort Bayard General Hospital, 624.
 Fort Sam Houston, 641.
 Honolulu, 646.
 Letterman General Hospital, 638.
 Signal Corps, 876.
 Walter Reed General Hospital, 616.
 Land purchases, 203, 360.
 Leases, 427.
 Leggings, 352.
 Legislation along educational lines, 56.
 Library, Surgeon General's office, 471, 668.
 Lighting systems, 361.
 Losses by fire and storm, 364.

M.

McCain, Brig. Gen. H. P., The Adjutant General, report, 235-294.
 McCaw, Col. Walter D., Medical Corps, department surgeon, 466.
 McIver, Col. G. W., Chief of the Militia Bureau, report, 895-1160.
 Machine guns, 60, 824, 825.
 Males of military age in the United States, 900.
 Maneuvers, 301.
 Manila ordnance depot, 855.
 Manuals:
 Army bakers and cooks, 341.
 Quartermaster General's, 403.
 Signal Corps, 877.
 Manufacturing plants, 166.
 Medals of honor, 291.
 Medical and hospital supplies, 667.
 Medical department:
 Army Medical School, 652.
 Army Nurse Corps, 651.
 bulletins, 655.
 contract surgeons, 649.
 correspondence course, 661.
 department surgeons, 465.
 enlisted force, 650.
 financial statement, 687.
 instruction and training, 660.
 reorganization, 470.

Medico-military observers of European war, 472.

Mental aberration, 529.

Mexican border, 7, 31, 186-189, 364, 433.

Mexico, expedition into, 474.

Military Academy. *See* United States Military Academy.

Military aviation. *See* Aviation.

Military laws, revision of, 47.

Military policy for the United States, 155.

Military post exchanges, 358.

Military training in high schools, 48.

Militia:

 federation of, 11-13.

 mobilization of, 188, 193.

 Organized. *See* National Guard.

Militia Bureau:

 development of, 944.

 expenses, 1160.

 history of, 191.

 personnel, 946.

 report, 985-1160.

Milk examination, 644.

Mobile and Coast Artillery, functions of, 216.

Mobilization, lessons of, 16.

Mobilization of industries, 207.

Mobilization of Organized Militia and National Guard, 11, 193, 342, 378, 433, 474. *See also* National Guard.

Mortars, 823.

Motorcycles, 383.

Motor equipment in ordnance matériel, 832.

Motor trucks, 22, 195, 376, 383, 440, 452.

Mounted Service School, 177.

Mules, 179.

Museum, Army Medical, 472.

N.

National cemeteries. *See* Cemeteries.

National defense act, 163.

National Defense, Council of, 38.

National Guard:

 armory instruction, 900, 901, 926.

 artillery instruction, 903, 1142, 1144, 1159.

 aviation, 915.

 call of, 280.

 clothing allowance, 934.

 Coast Artillery, quota of, 910, 1165.

 competitions, 927.

 deficient in Coast Artillery, 1164.

 dual oath, 944.

 Engineer troops, 913.

 Federal funds, 929.

 federalized, 165.

 Federal property, 931, 1151.

 Field Artillery, 180, 920.

 functions, 225.

 Infantry, 899.

 instruction, 903, 908, 919, 921, 936, 1136.

 legislation, 937.

 limitations, 156.

 machine-gun unit, 923.

 matériel, 921.

National Guard—Continued.

mobilization, 189, 193, 342, 896.
 moved to Mexican border, 433.
 National Trophy award, 1140.
 noncommissioned officers, 922.
 organization, 166, 938, 989.
 organizations called into service, May 2, 1916, 1132.
 physical examination, 921.
 pistol practice, 927.
 range and practice of individuals, 926.
 rifle camps, 926.
 sanitary troops, 659, 918, 1137.
 Signal Corps, 914.
 stations, 964.
 status, 14.
 strength, 948.
 student organizations, 909.
 target practice, cost of, 924, 925, 1138.
 target ranges, 928.

National Home for Disabled Volunteers, 298.

National Military Park Commissions:

Chickamauga and Chattanooga, 1221-1226.
 Gettysburg, 1229-1238.
 Shiloh, 1241-1248.
 Vicksburg, 1251-1256.

National Militia Board, 935, 1159.

National preparatory schools 57.

Newspapers, 337.

New York Arsenal, 852.

Niagara Falls, withdrawal of additional water, 67.

Nicholson, Lieut. Col. John P., chairman,
 Gettysburg National Military Park
 Commission, report, 1229-1238.

Nitrate acid supply, 823.

Nitrate plant, 43.

Nitrates, 167.

Nomenclature, international, 476.

Nurse Corps, 473.

O.

Obregon, Gen., conference with, 187.

Officers:

advancements in grade, 243.
 certificates of merit, 292.
 Civil War soldiers, 250.
 commissioned in active service, 242.
 deaths, causes of, 478.
 detached service, 165, 243.
 distribution as to functions, 245.
 examined for promotion, 45, 248.
 provisional appointments of, 164.
 Reserve Corps, 165, 251.
 retired on active duty, 247.
 retirement of, 165, 477.
 roster of, in Civil War, 290.

Official records of the Union and Confederate Armies, 290.

Ordnance, shortage in, 183.

Ordnance and Fortification, Board of, 59.

Ordnance board, personnel, 855.

Ordnance Department:

capacity for production, 822.
 designing work, 830.
 disbursements, 810, 815.
 equipment for mobile army, 818.
 expenditures, 807.
 fiscal affairs, 806.
 gun construction, 824.
 inspection, 835.
 inspectors of ordnance, 835, 837, 844.
 leaves of absence, 817.
 liability act, 816.
 maintenance of armament, 832.
 Manila ordnance board, 855.
 motor equipment, 832.
 Ordnance board, 855.
 receipts, 807.
 report, 805-856.
 rifles of 1898, issue of, 819.
 Sandy Hook Proving Ground, 837.
 savings, 842.
 school of application, 837.
 scientific management, 817.
 seacoast guns, 823.
 Springfield Armory, 843.
 transfers of stores, 814.

Organization of first 500,000, 156.

Organized Militia. *See* National Guard.

Oversea service, 217.

P.

Pack outfits, 827.

Panama, relations with, 64.

Panama Canal:

defense of, 218.
 tolls, 63.

Panama Canal Zone, 605, 870.

Panama Railroad, 64.

Park Commissions. *See* National Military Park Commissions.

Parral incident, 8, 279.

Periodicals, 337.

Permanent Staff Corps, 169.

Pershing, Brig. Gen. John J., expeditionary force, 8, 187.

Philippine Islands:

deaths in, 563.
 defense of, 217.
 financial statement, 415.
 fuel, 392.
 government, 61.
 health in, 561, 587.
 native lumber, 393.
 new construction, 458, 462.
 potatoes, fresh, purchase of, 393.
 prevalence of special diseases, 565.
 railroads, 402.
 roads, 400.
 sanitation, 584.
 service in, 198.
 sewer system, 398.
 Signal Corps operation, 869.
 transportation, 402, 438.
 United States Army in, 241.
 water supply, 397.

